



Preliminary Report: Police Operations and Crime Analysis Annapolis, Maryland

Introduction

- The workload and response time information in this report was developed directly from data recorded in the department's dispatch center. Crime analysis is based on data from crime reports of Annapolis and similar cities. The purpose of this report is to provide the City with our findings and to allow the police department to review and bring to our attention any information which may be inconsistent with other internal records of the agency.



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Annapolis Crime Trend Analysis

How are we doing?

Part I Crime Rates, 2000 - present

Comparison Cities

Trends, 2001 - 2006

Hot Spot Mapping

Calls for Service Types and Times



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Annapolis Reported Crime

Part I - Crimes Reported to the Police	2000	2001	2002	2003	2004	2005	2006	2007	Trend
Homicide	2	4	4	5	3	4	7	8	▲
Rape	17	11	15	17	13	11	13	5	▼
Robbery	191	154	149	141	167	186	231	186	
Aggravated assault	320	315	253	227	254	244	264	249	
Burglary	297	333	414	406	316	314	508	412	
Larceny/Theft	1,463	1,456	1,380	1,480	1,290	1,188	1,267	1,180	▼
Motor Vehicle Theft	129	131	115	205	252	150	183	195	▲
Total	2,419	2,404	2,330	2,481	2,295	2,097	2,473	2,235	
Crime Rates (offenses per 100,000)	2000	2001	2002	2003	2004	2005	2006	2007	
Population	35,838	35,919	36,001	36,082	36,164	36,245	36,327	36,408	
<i>Homicide</i>	6	11	11	14	8	11	19	22	
<i>Rape</i>	47	31	42	47	36	30	36	14	
<i>Robbery</i>	533	429	414	391	462	513	636	511	
<i>Aggravated assault</i>	893	877	703	629	702	673	727	684	
<i>Burglary</i>	829	927	1,150	1,125	874	866	1,398	1,132	
<i>Larceny/Theft</i>	4,082	4,054	3,833	4,102	3,567	3,278	3,488	3,241	
<i>Motor Vehicle Theft</i>	360	365	319	568	697	414	504	536	
<i>Violent Crime (per 1,000 residents)</i>	15	13	12	11	12	12	14	12	
<i>Property Crime (per 1,000 residents)</i>	53	53	53	58	51	46	54	49	
<i>Total (per 100,000 residents)</i>	6,750	6,693	6,472	6,876	6,346	5,786	6,808	6,139	
	2000	2001	2002	2003	2004	2005	2006	2007	
Unemployment Rate	3.6	4.1	4.6	4.5	4.4	3.5	3.4	3.3	▼

Summary of Trends

1. Homicide rate is three times the national rate. Now approaching (or higher than) some big city rates, e.g., Miami, Atlanta, Houston, Chicago, Boston.
2. Crime down slightly last year. 2006 was a bad year for violence and burglary.
3. Overall, total violent and total property crime at same levels as 2000.



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Homicide: U.S., State and Annapolis

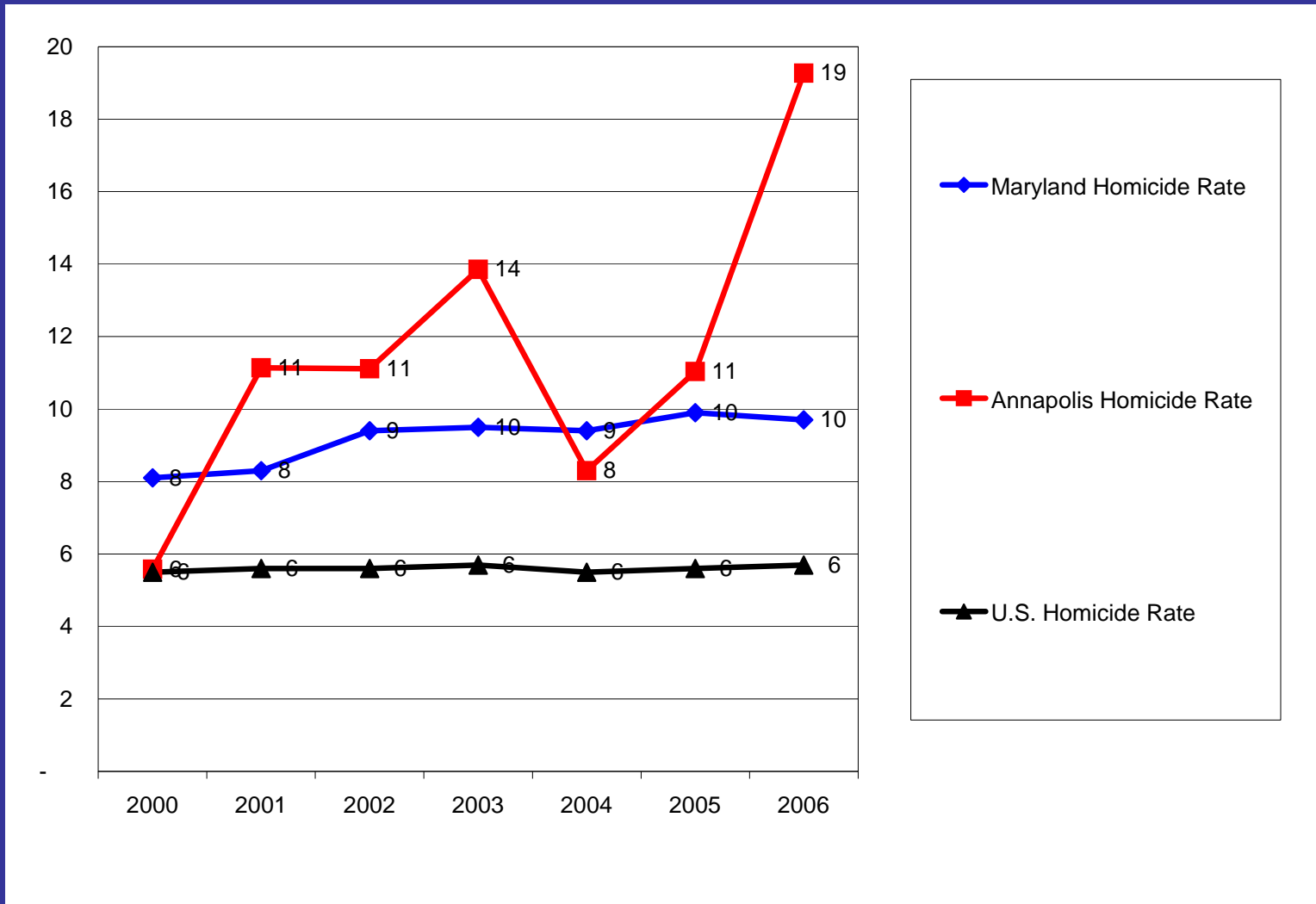


Chart shows crimes per 100,000 residents

Violence: U.S., State and Annapolis

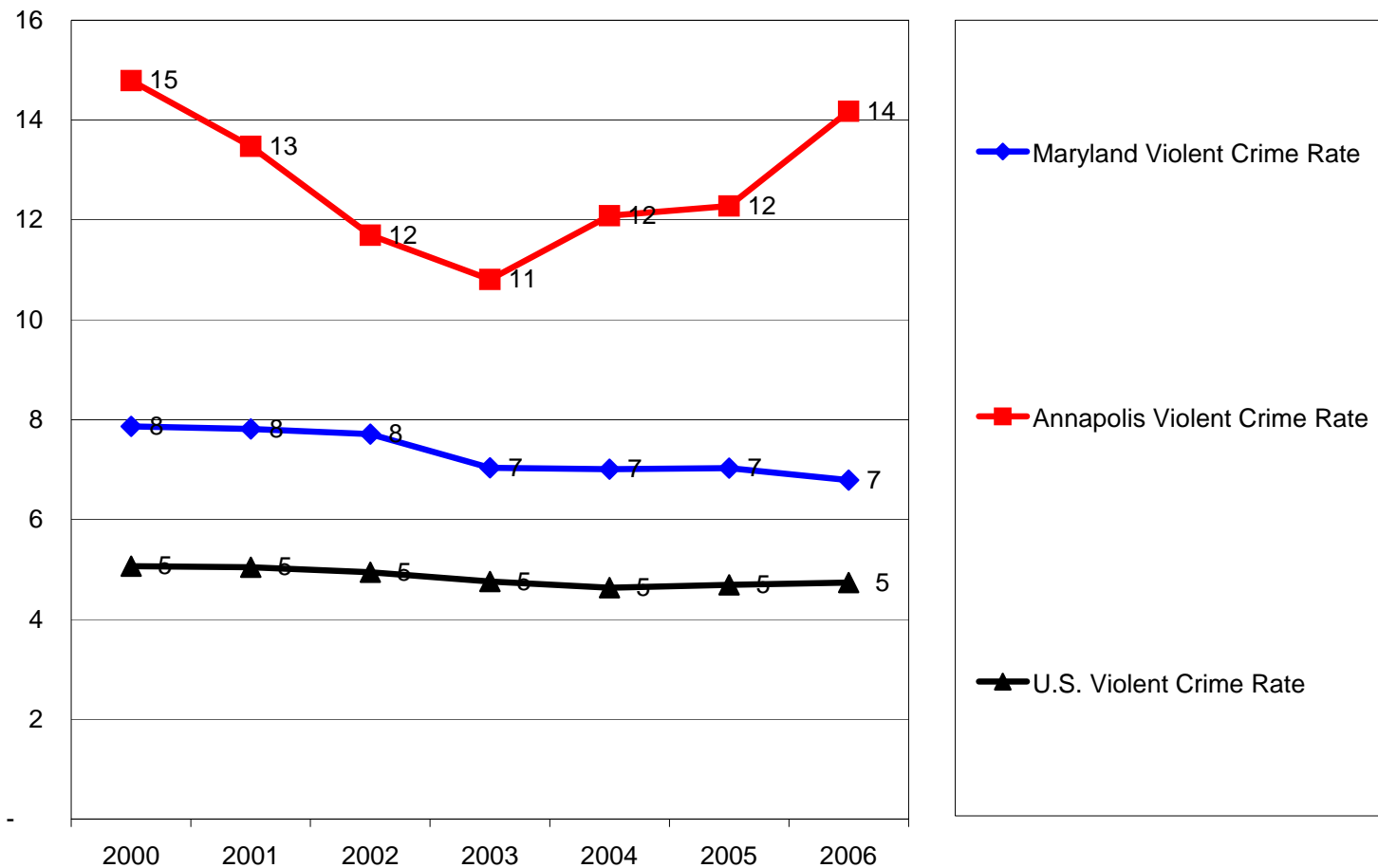


Chart shows crimes per 1,000 residents



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Robbery: U.S., State and Annapolis

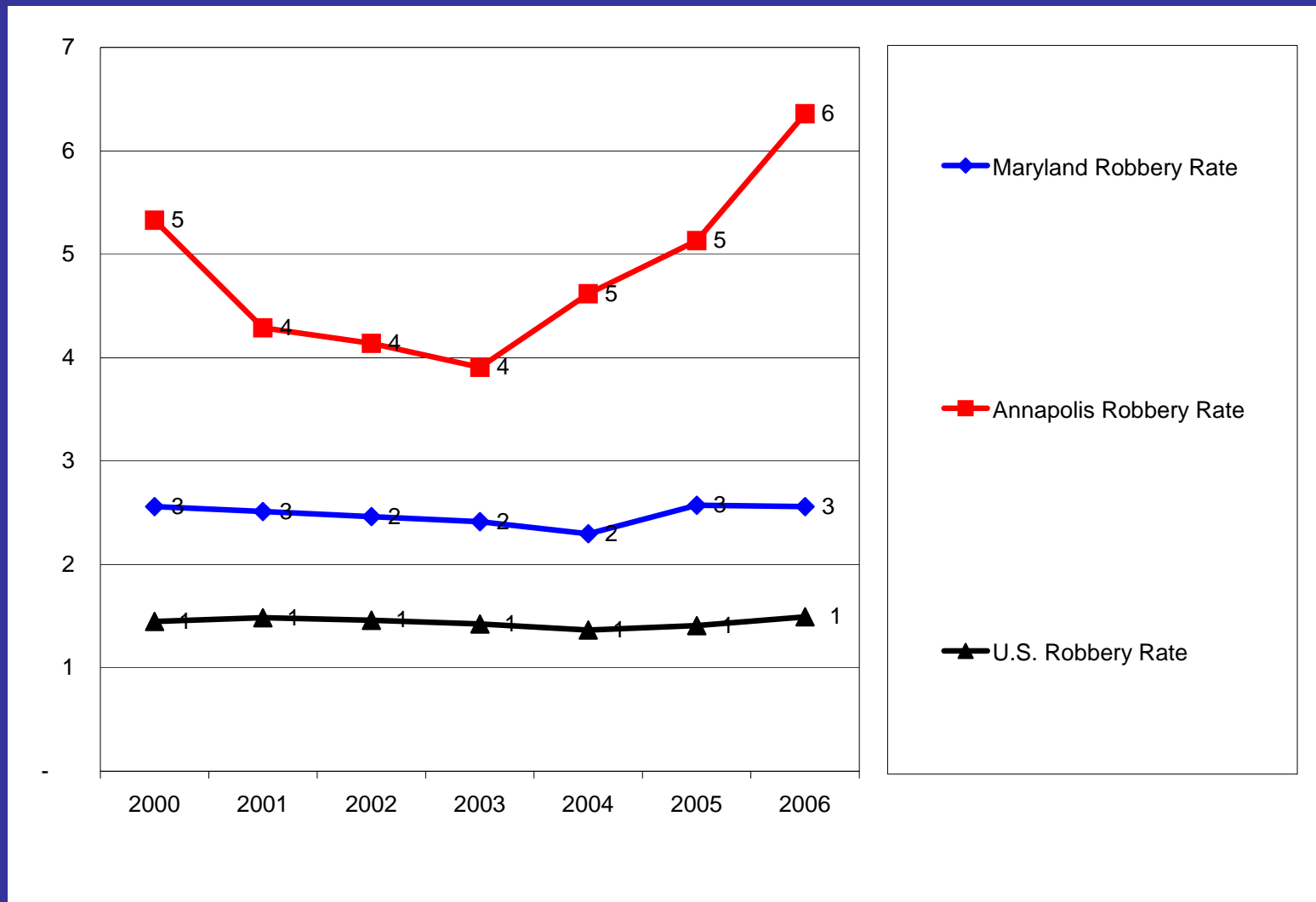


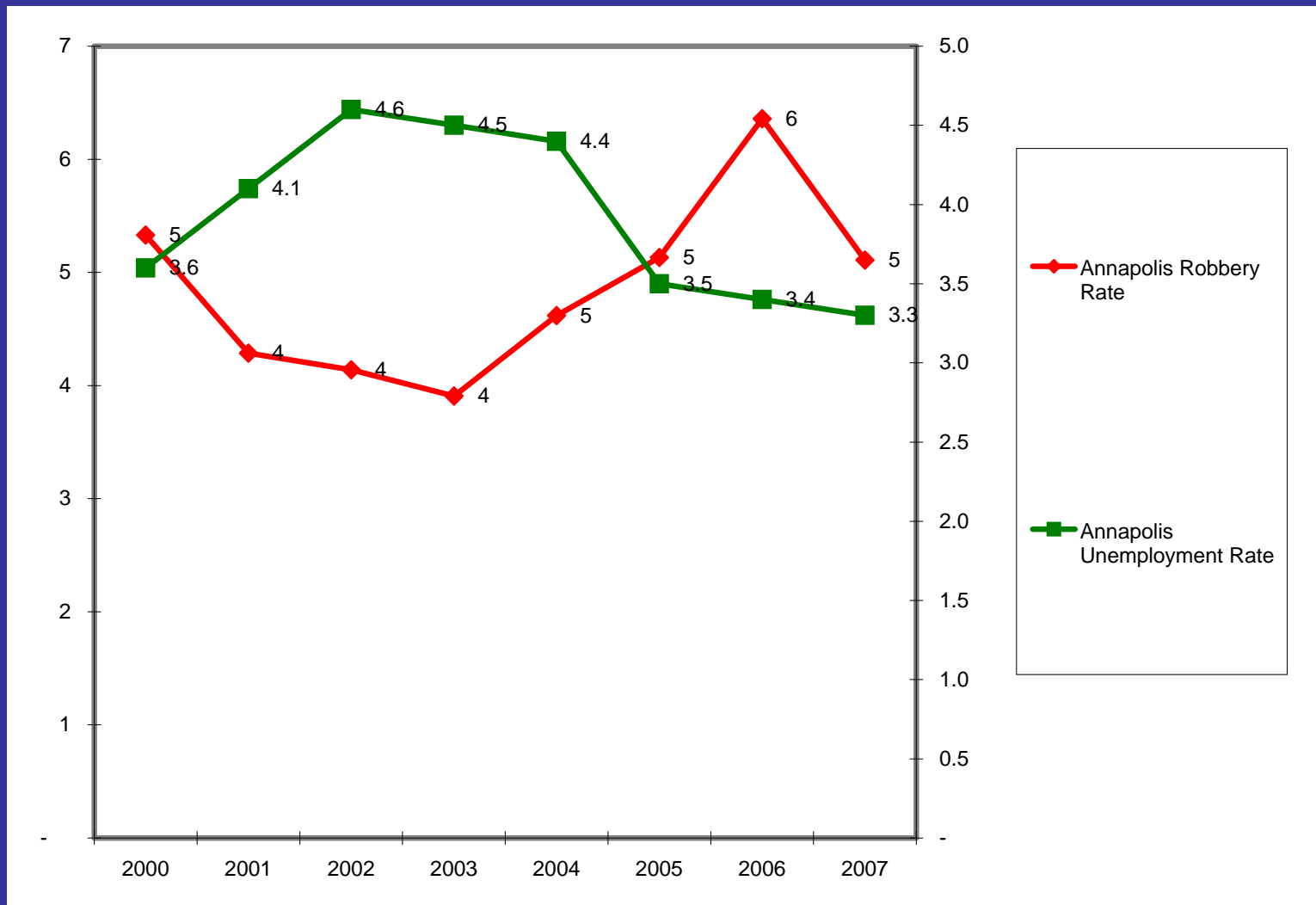
Chart shows crimes per 1,000 residents



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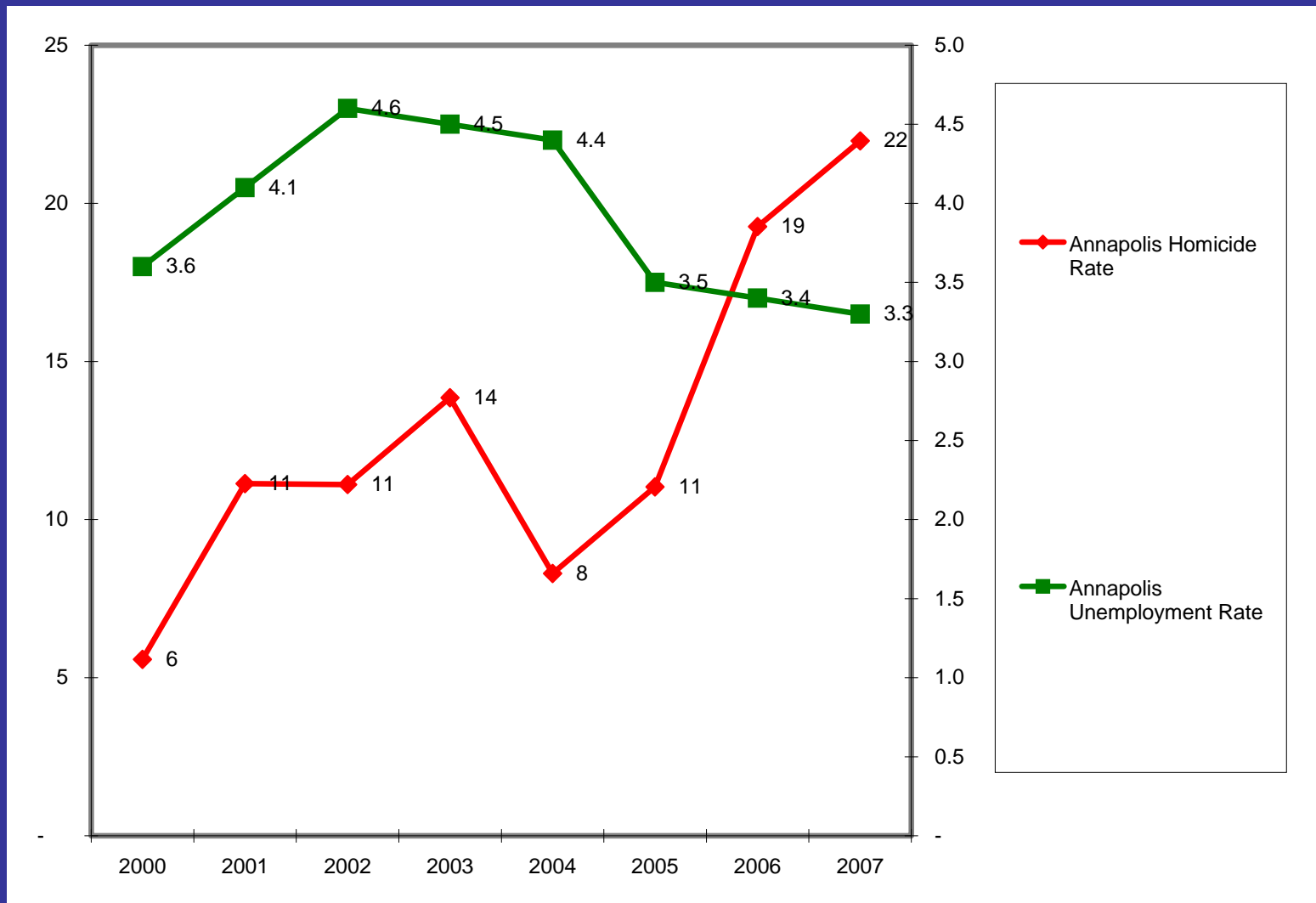
Unemployment and Robbery



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Unemployment and Murder



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Comparison Cities

Selected several cities, based on population and presence of public and subsidized housing.

<u>City</u>	<u>Population</u>
Annapolis	36,399
Essex	39,118
Frederick	58,066
Hagerstown	38,431
Rockville	47,257
Salisbury	26,367
Wheaton-Glenmont	57,723

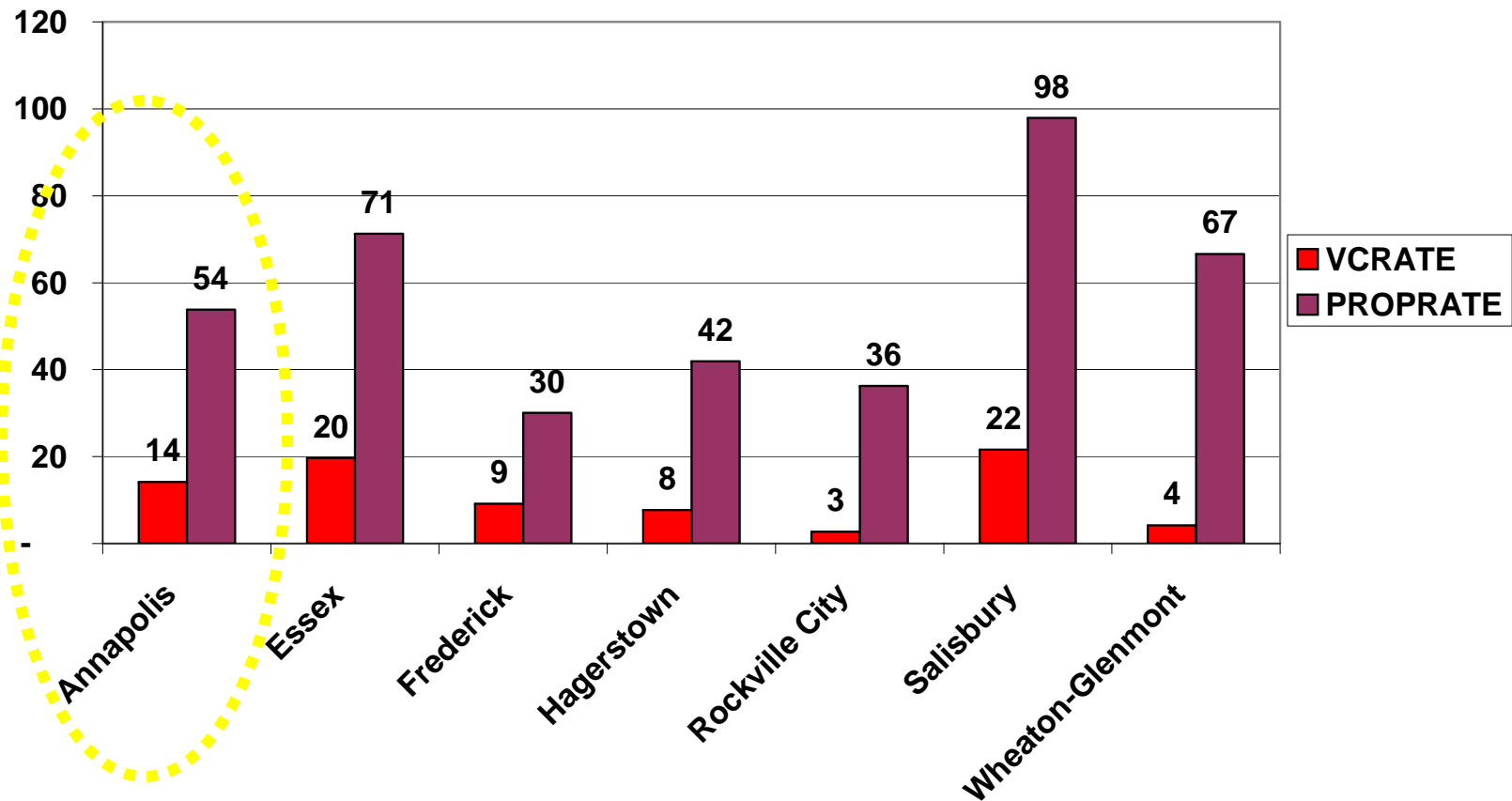


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Crime in 2006

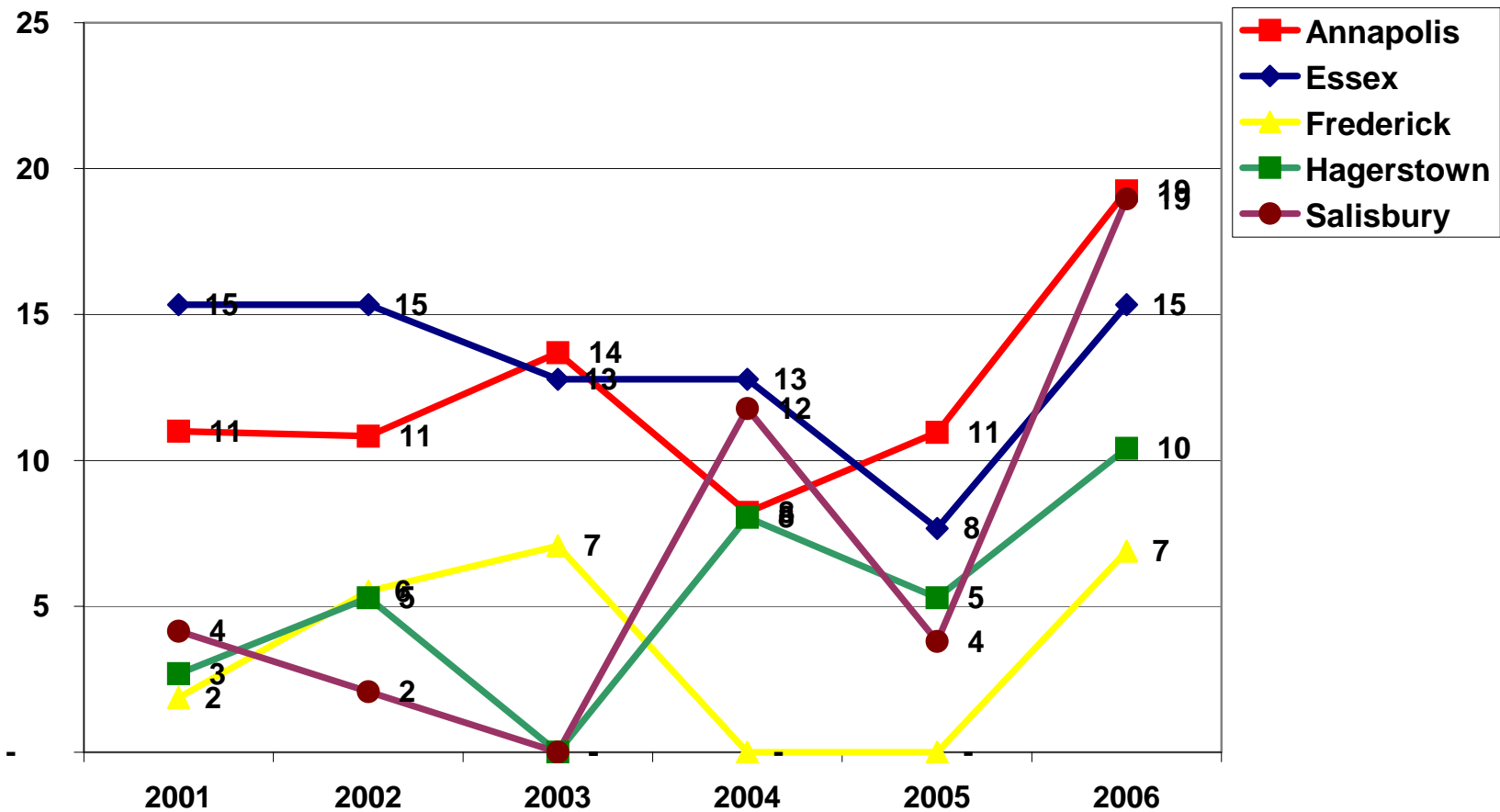
2006 Crime Rates (reported offenses per 1,000 population)



Note: Wheaton-Glenmont data is for 2005.

Homicide, 2001-2006

Homicide Rates (reported offenses per 1,000 population)

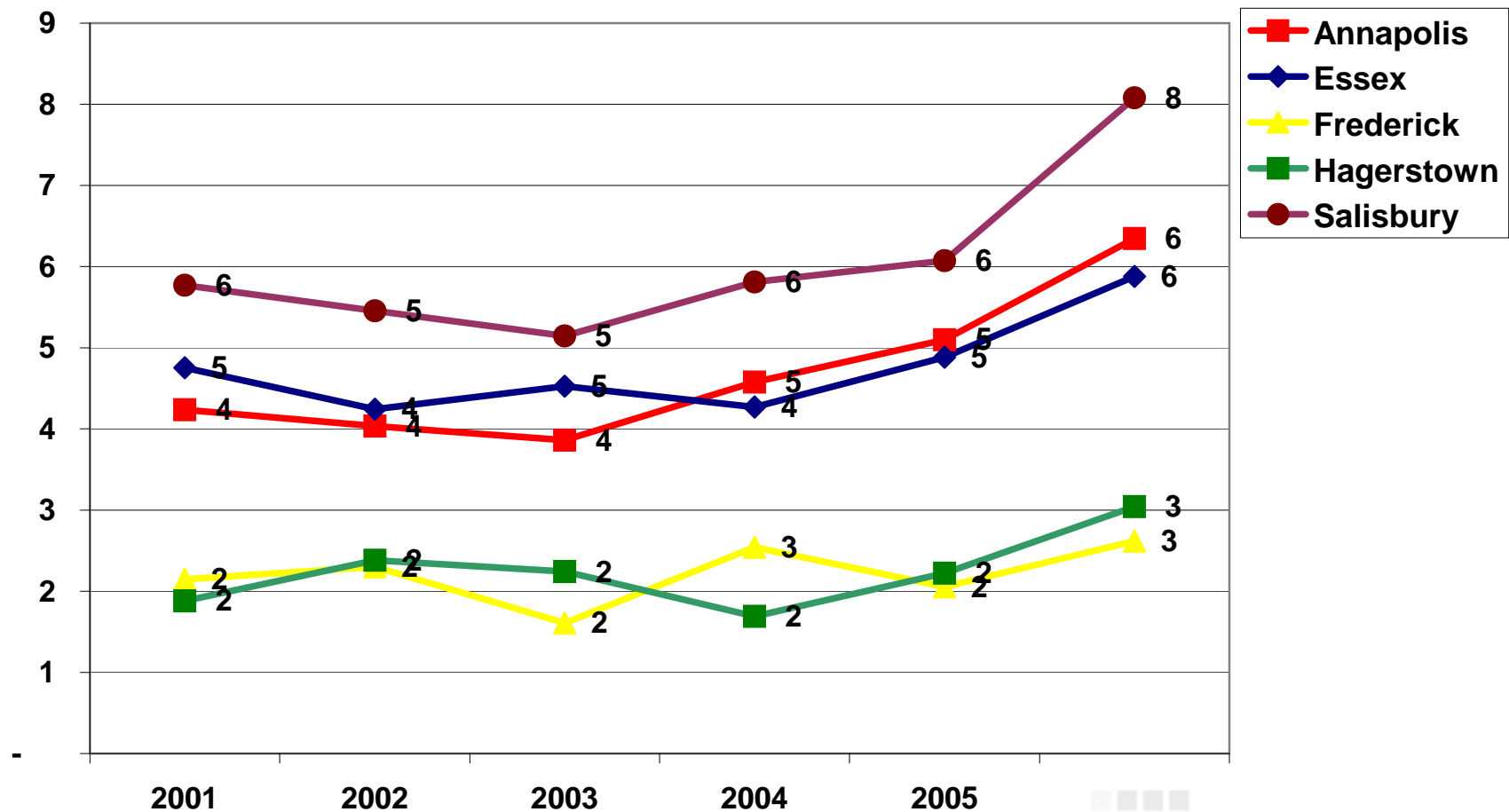


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Robbery, 2001-2006

Robbery Rates (reported offenses per 1,000 population)

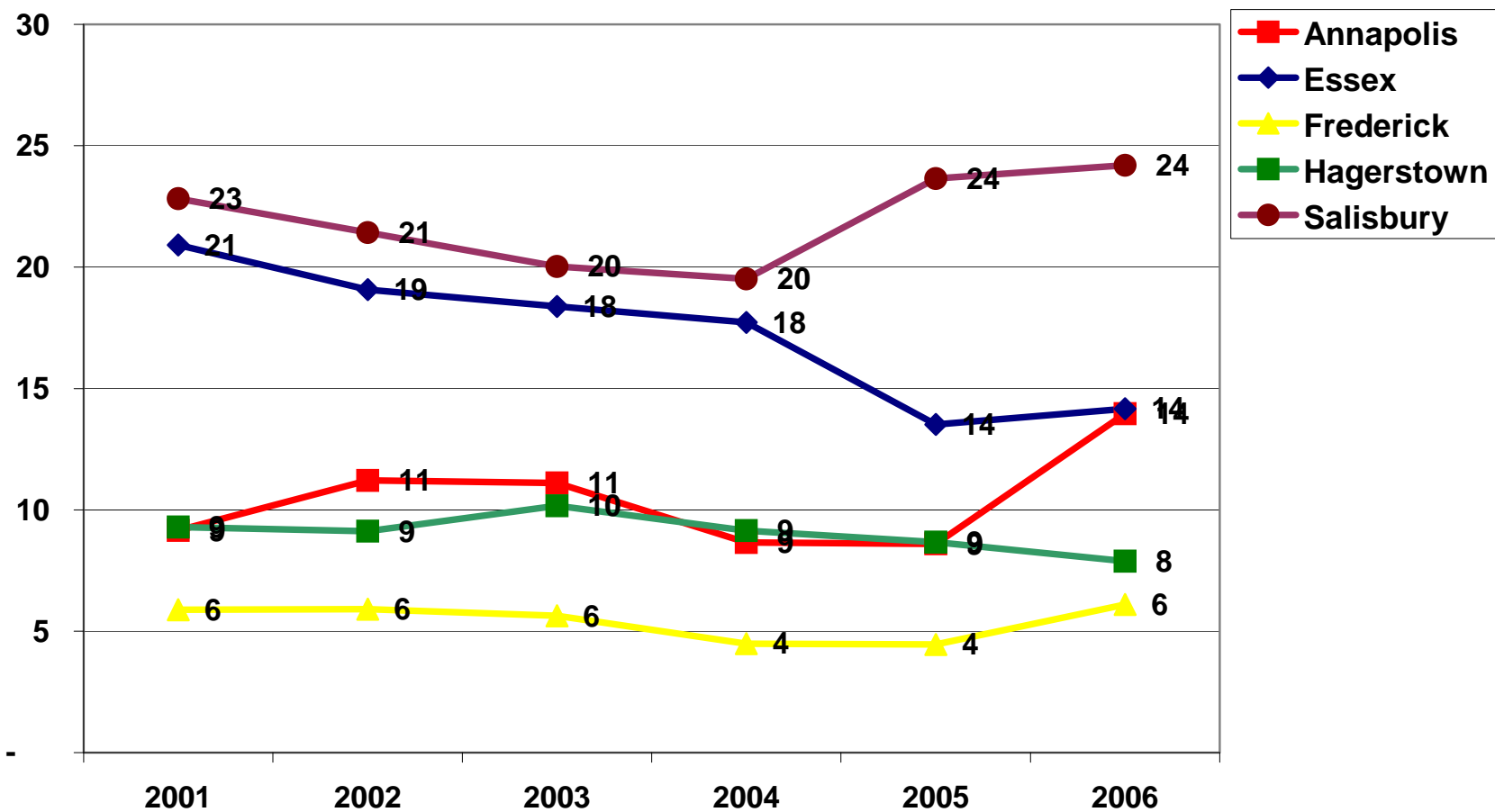


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Burglary, 2001-2006

Burglary Rates (reported offenses per 1,000 population)

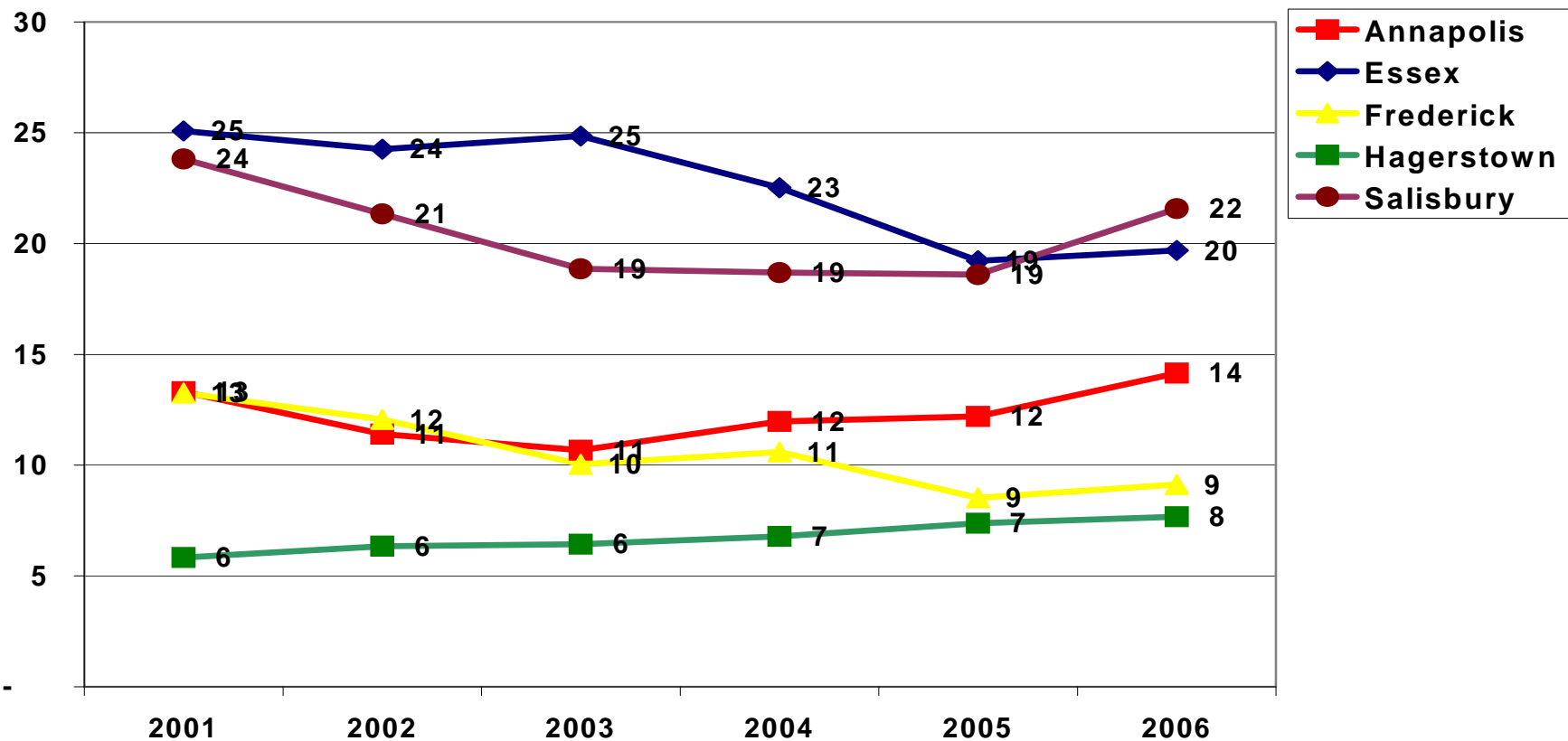


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Violence, 2001-2006

Violent Crime Rates (reported offenses per 1,000 population)

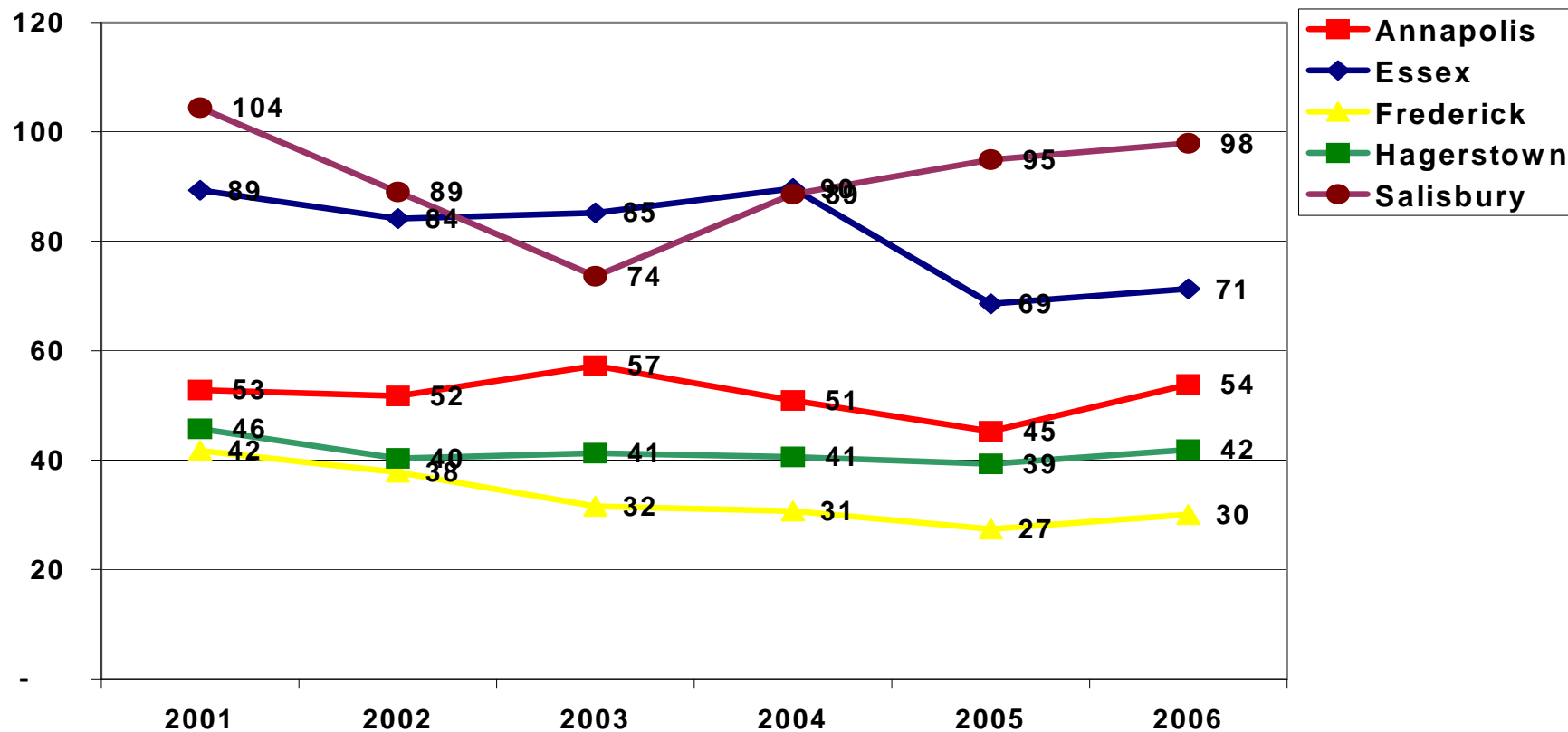


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Property, 2001-2006

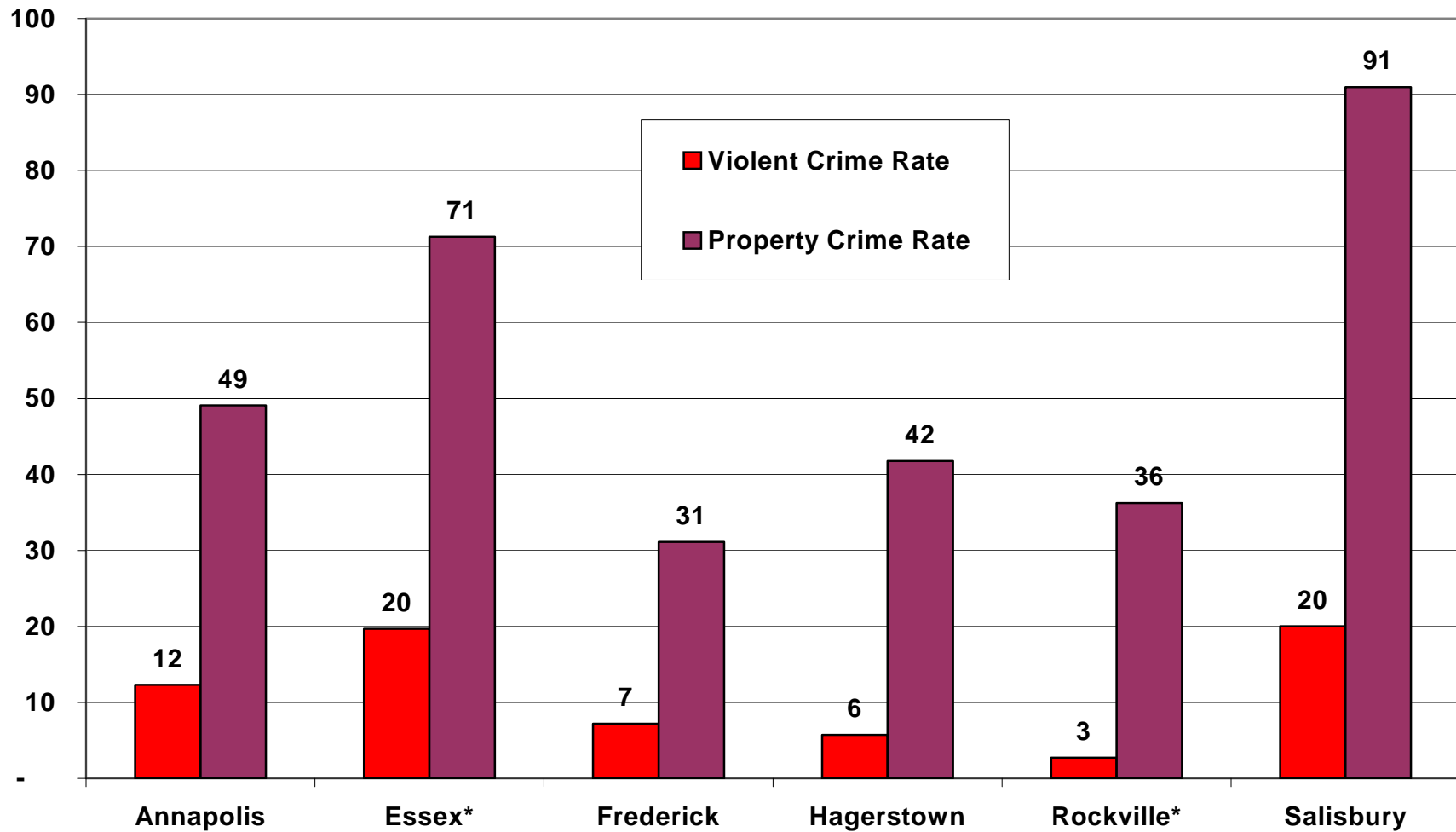
Property Crime Rates (reported offenses per 1,000 population)



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Reported Crimes per 1,000 Population in 2007



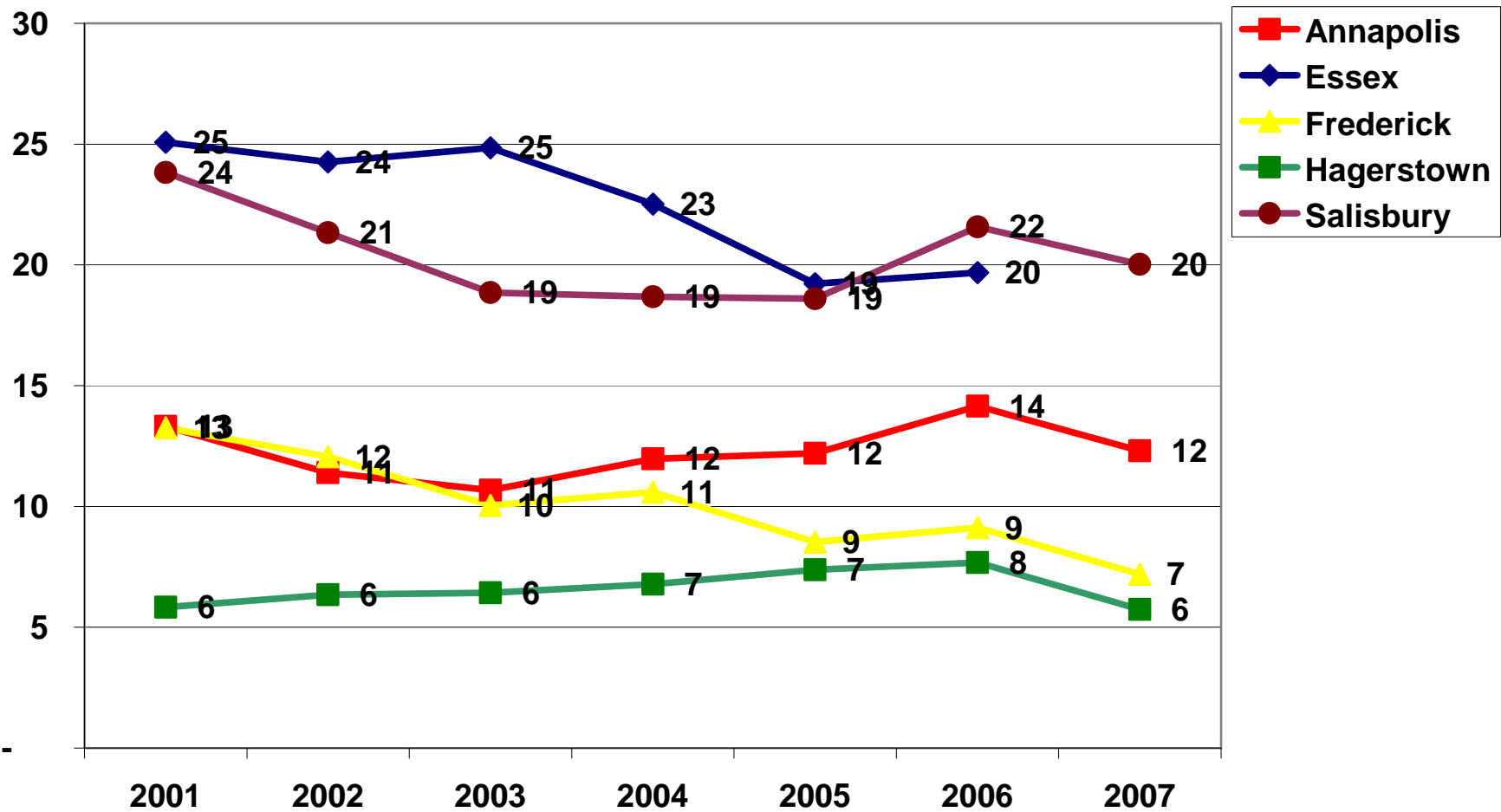
*denotes 2006 data



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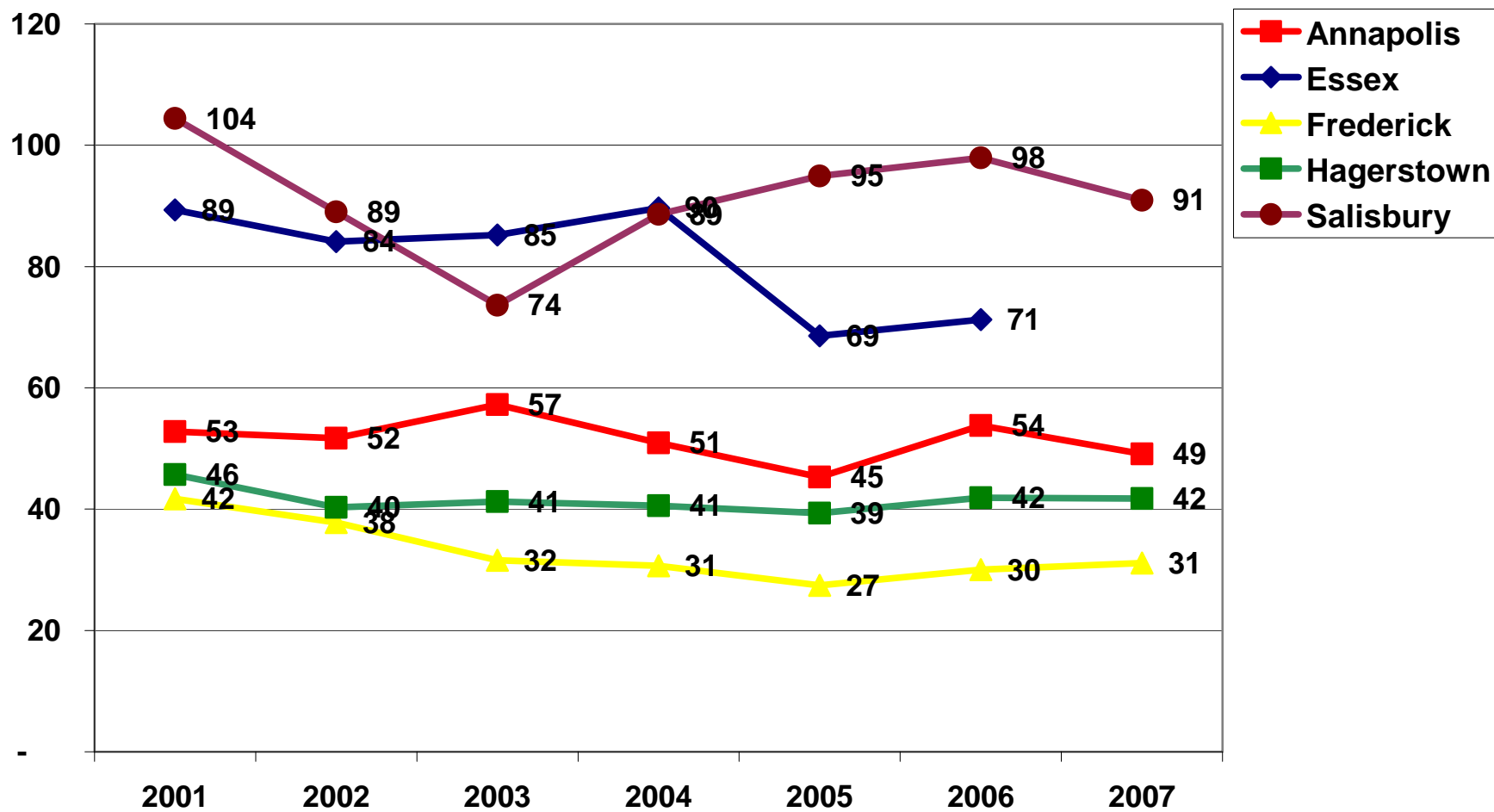
Trends in Violent Crime
(reported offenses per 1,000 population)



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Trends in Property Crime
(reported offenses per 1,000 population)



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Calls for Service in 2007

Hot Spot Mapping

1. Grouped call types into categories
2. Mapped 39,000 calls
3. Assigned to grid cells (areas)



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Calls for Service in 2007

Hot Spot Mapping

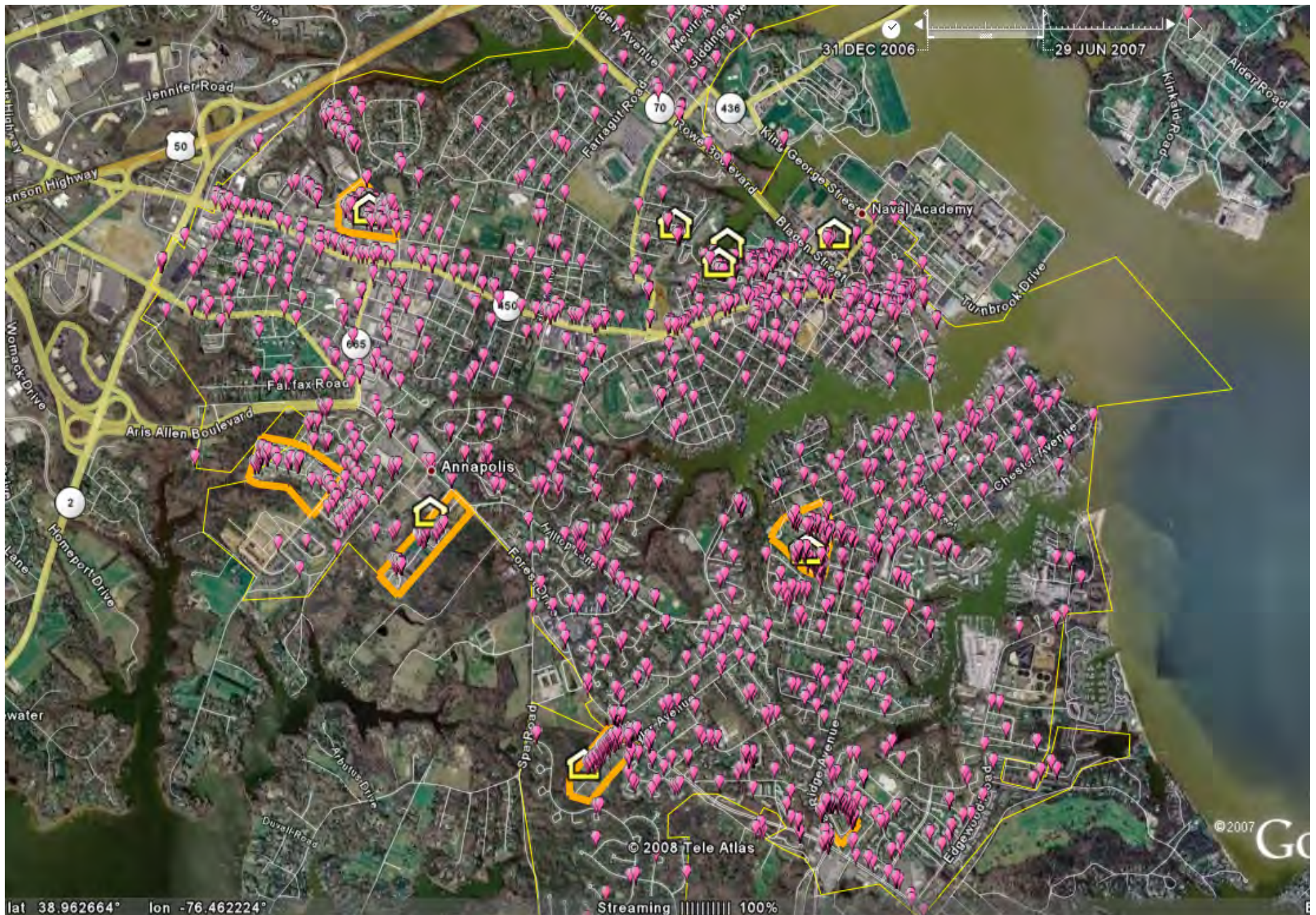
1. 1.5 percent of addresses account for 25 percent of all calls. 2 percent = 30 percent.
2. High concentration in and near public housing.
Esp., Major crimes/violence



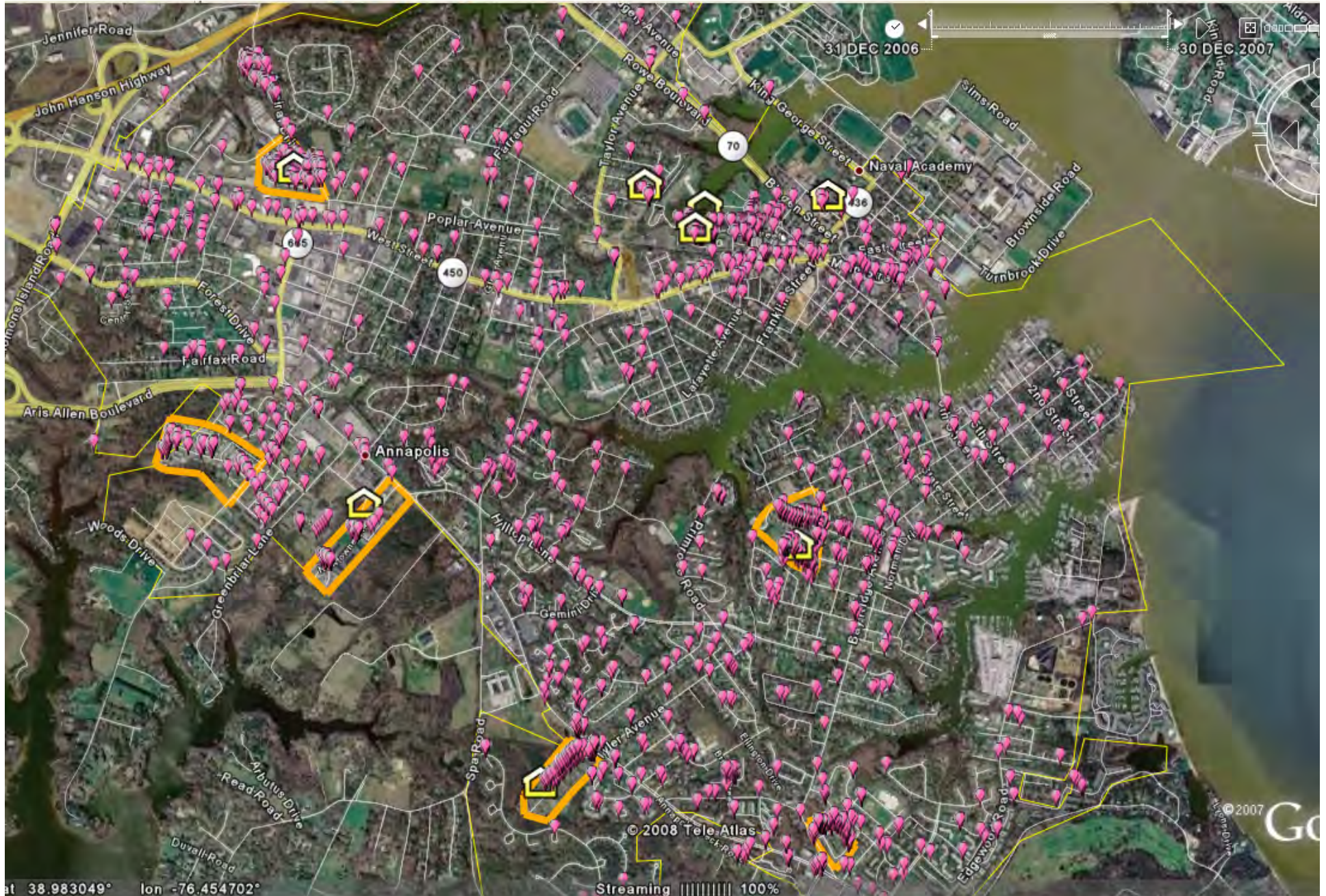
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All Major Crimes - Call Locations in 2007

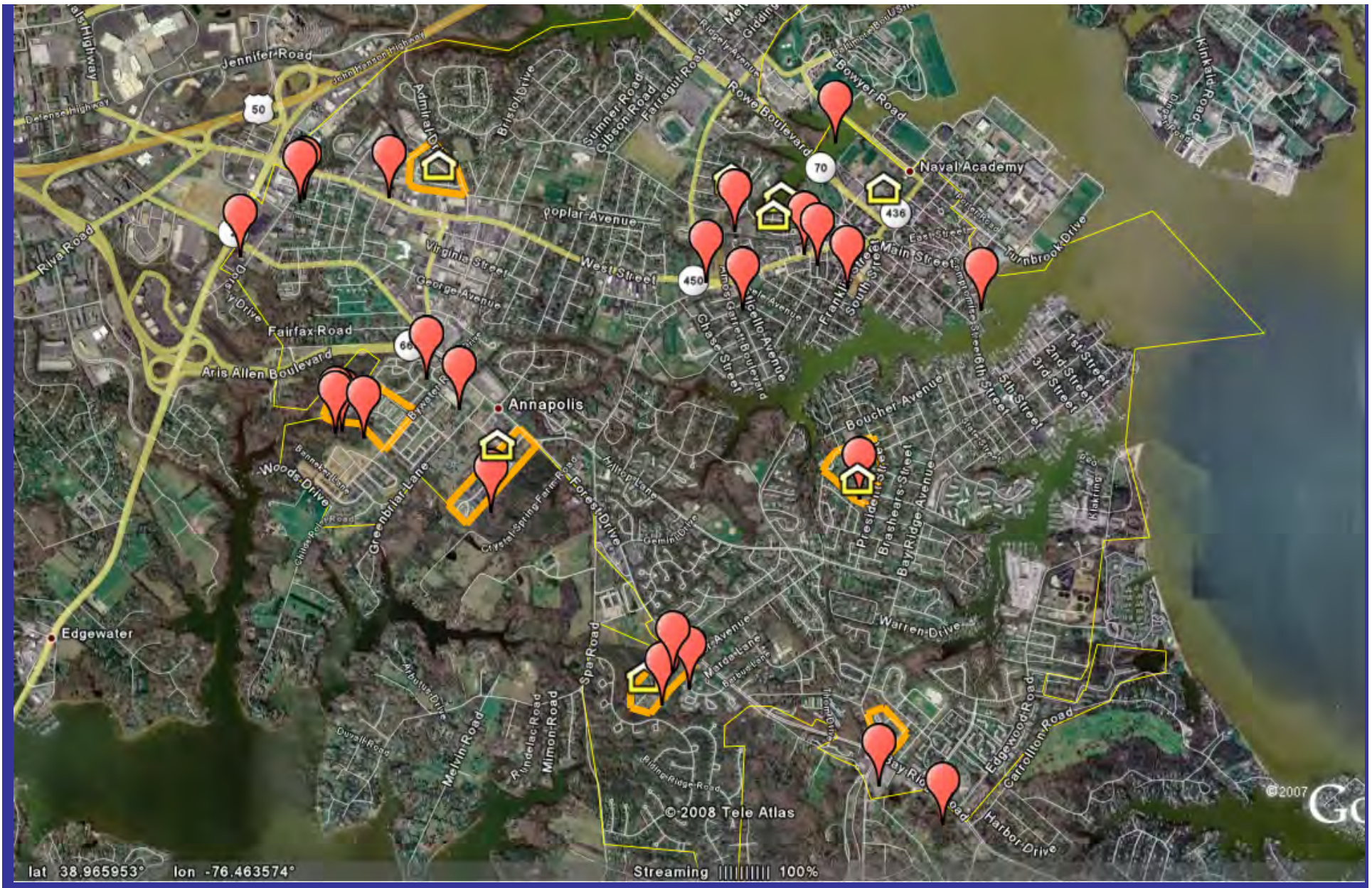


Violence - Major Crime Call Locations in 2007

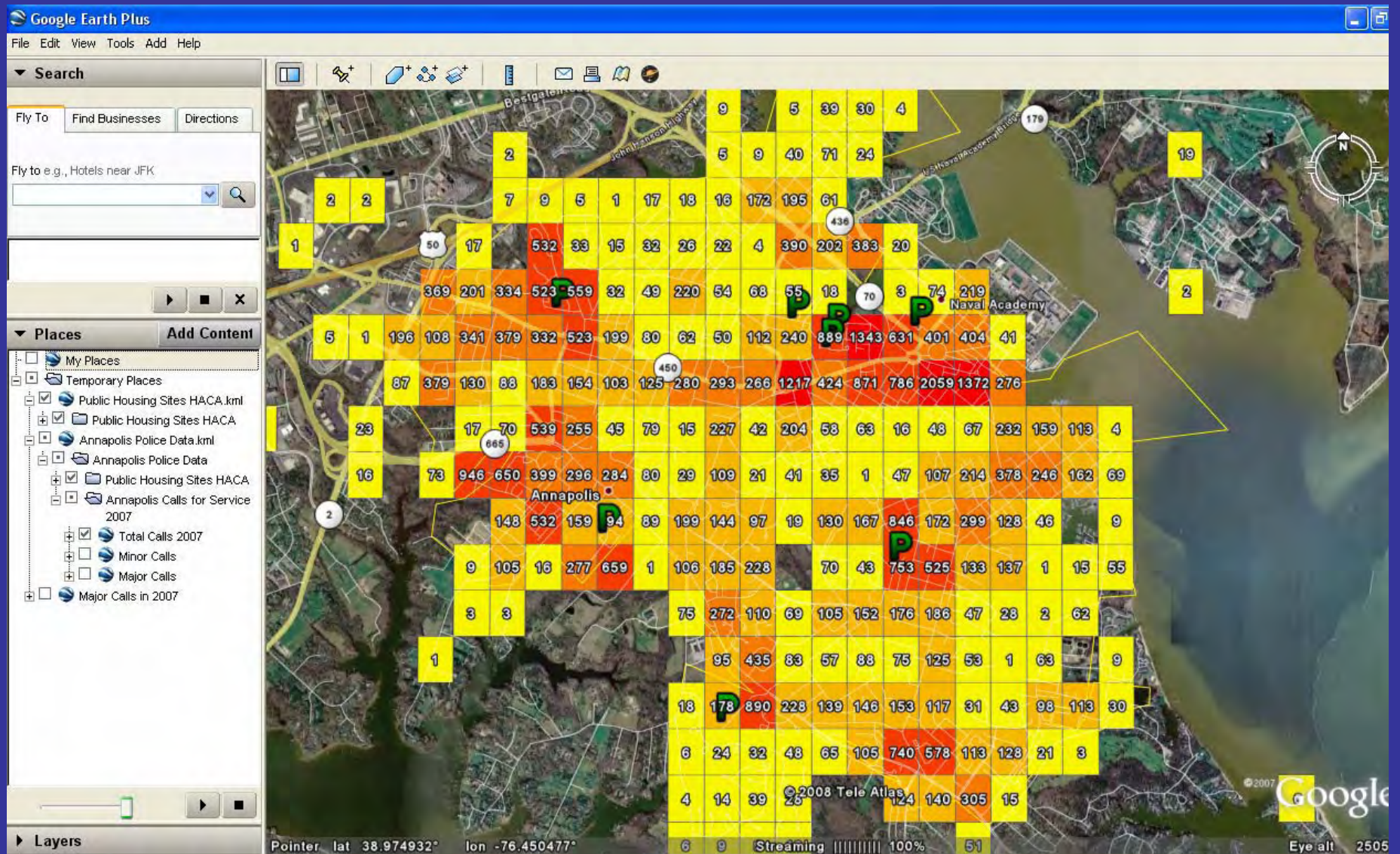


Top 25 Call Locations in 2007

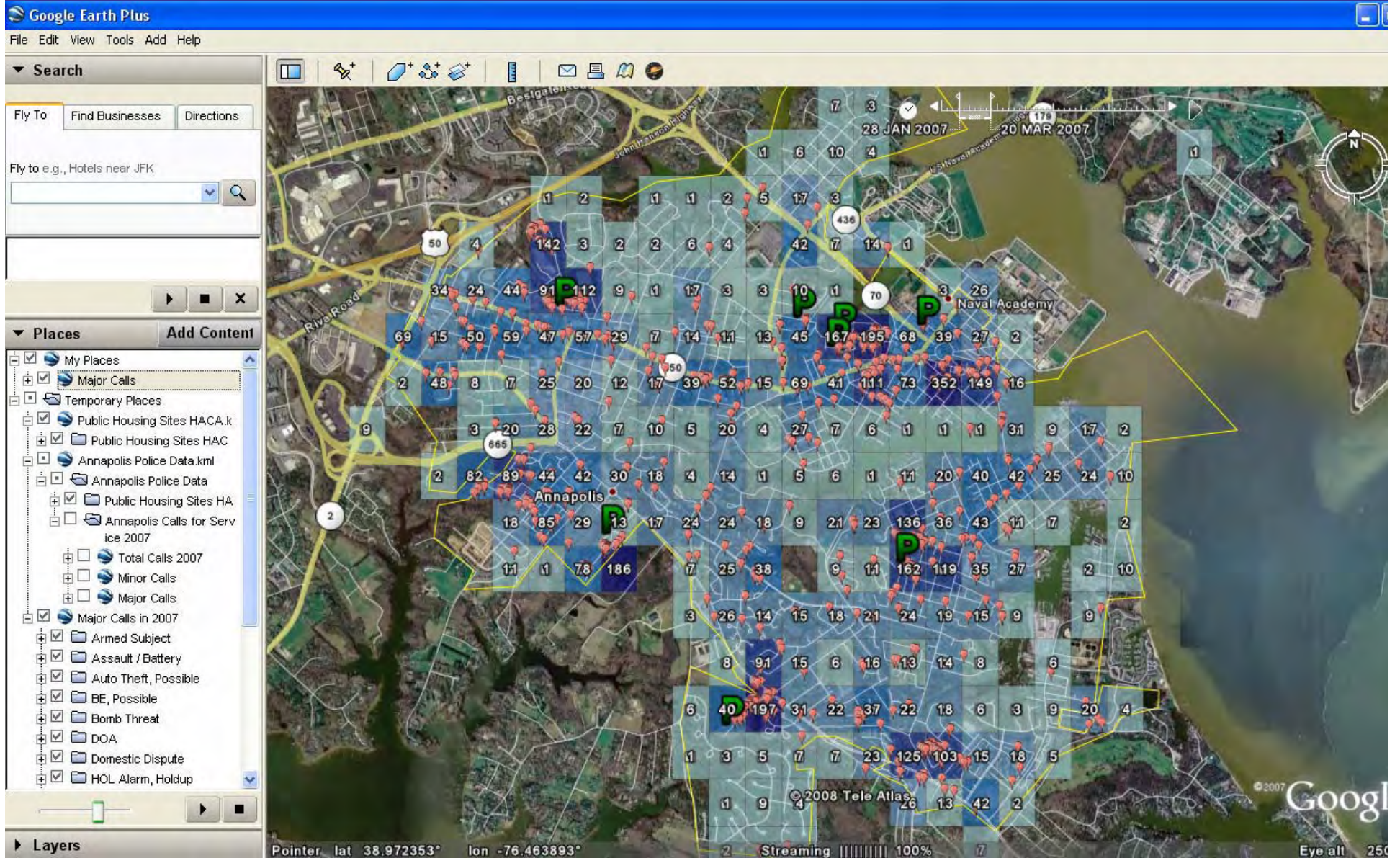
2 percent of locations account for 30% of calls



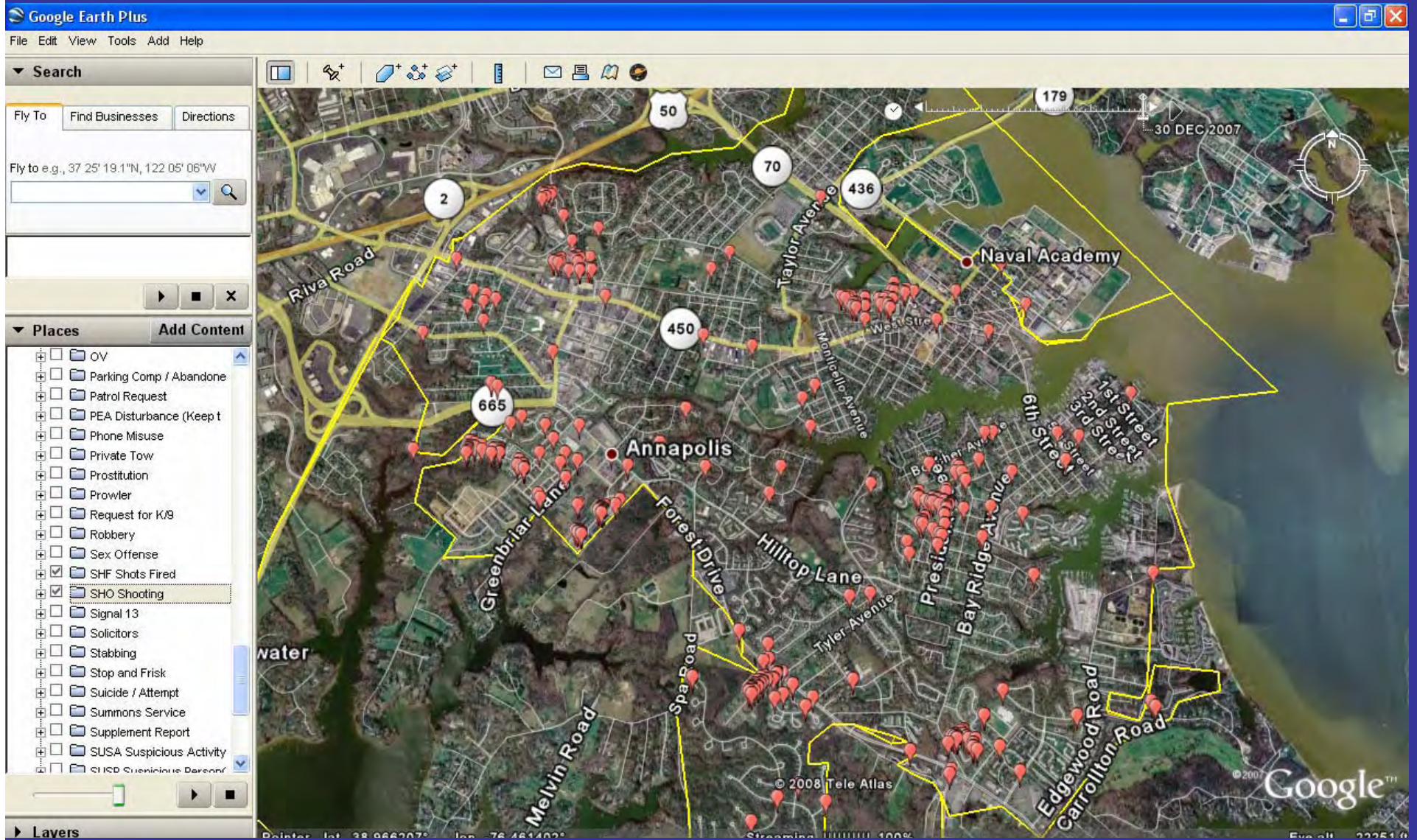
All Calls for Service



Major Crime (calls for service)



Shots Fired - Shootings



Workload and Deployment Analysis



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Problems

- There is no priority assigned to a call. Thus it is impossible to determine if the call was an in-progress or emergency call or a routine response call. (Liability issues)
- There is no explicit record of calls cancelled in route.
- There are a large number of activities with zero time on scene. These seem to be routine activities of a patrol force, such as drive by checks that are recorded as calls for service. These calls greatly inflate the activity statistics without actually increasing workload.
- The department does not explicitly categorize calls by their source. It is not obvious which were police initiated or “citizen” or “other” initiated. We had to create our own criterion to make a judgment as to the likely source of the call. Typically, agencies classify as police or officer initiated calls those that were generated by the field officer.



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Observations

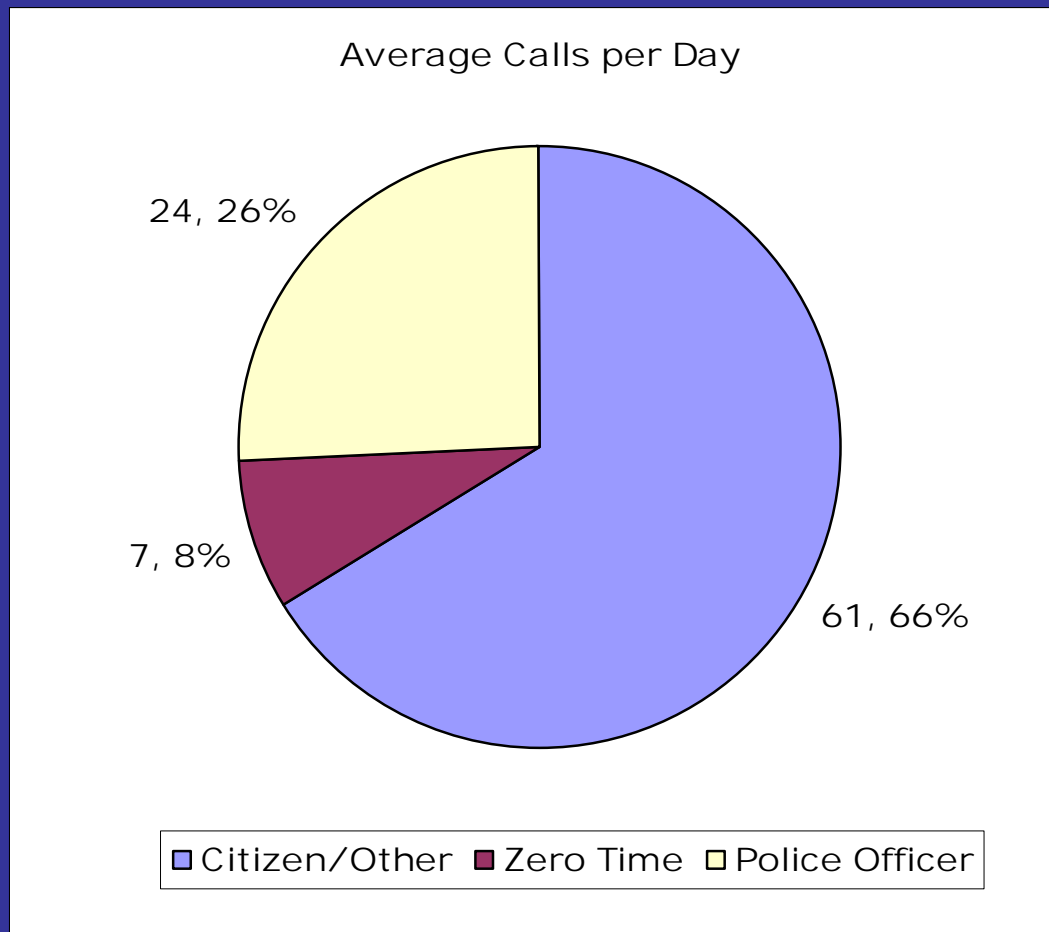
- We believe that these deficiencies complicate management's ability to analyze call for service data on a regular basis. We will address these issues in our recommendations in the final report. To identify calls which were cancelled en-route we have assumed that a zero time on scene is a significant portion of these calls. We assume a call is patrol initiated if the recorded travel time is less than 10 seconds.



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Average Calls per Day (24 hrs)



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Observations

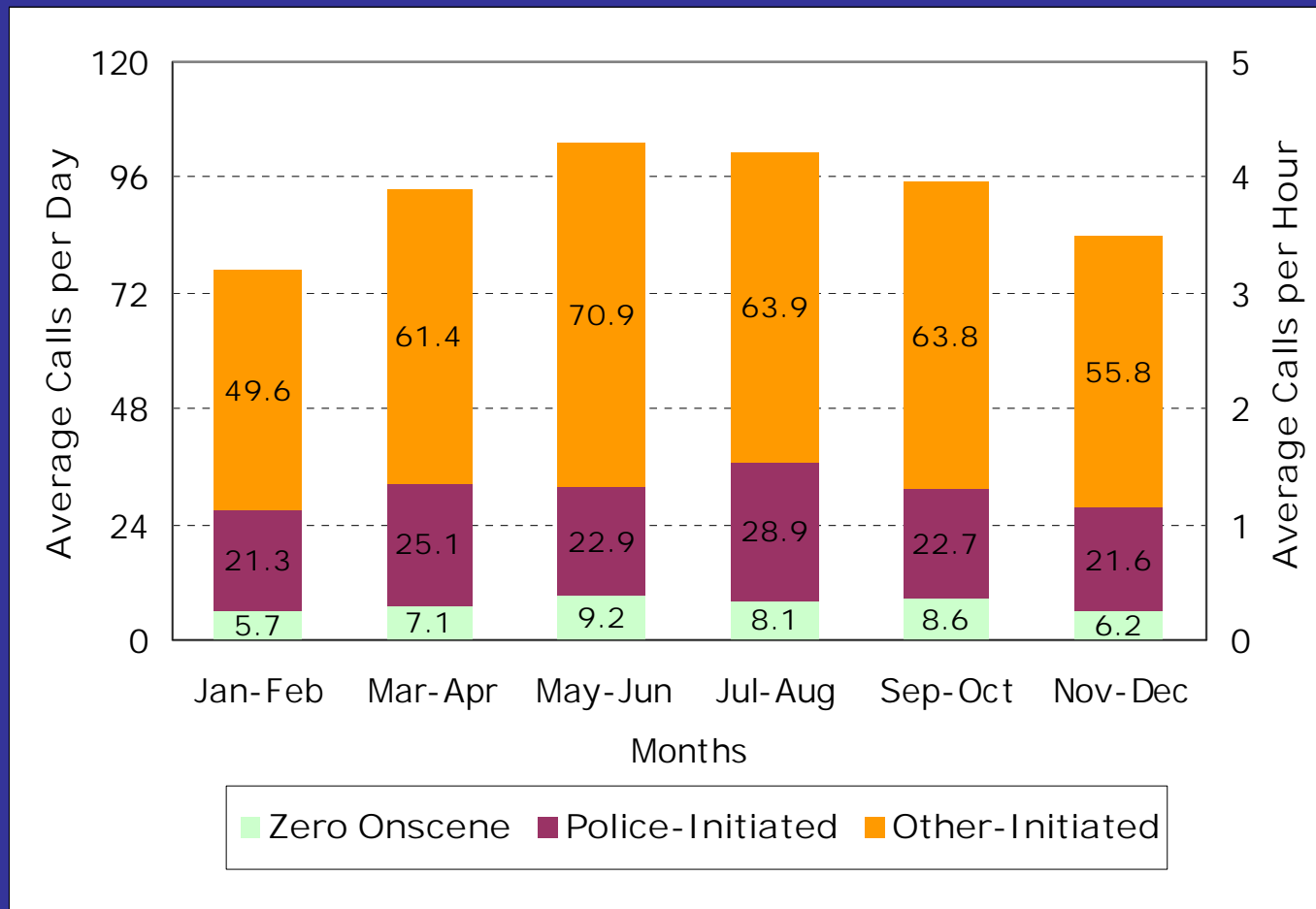
- More than one-quarter of all patrol activities recorded by dispatch were police officer initiated
- One out of every twelve calls incurred no on-scene time
- On average there were 61 citizen initiated calls, approximately 2.5 per hour.



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Average Calls per Day by Initiators, by Months



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Observations

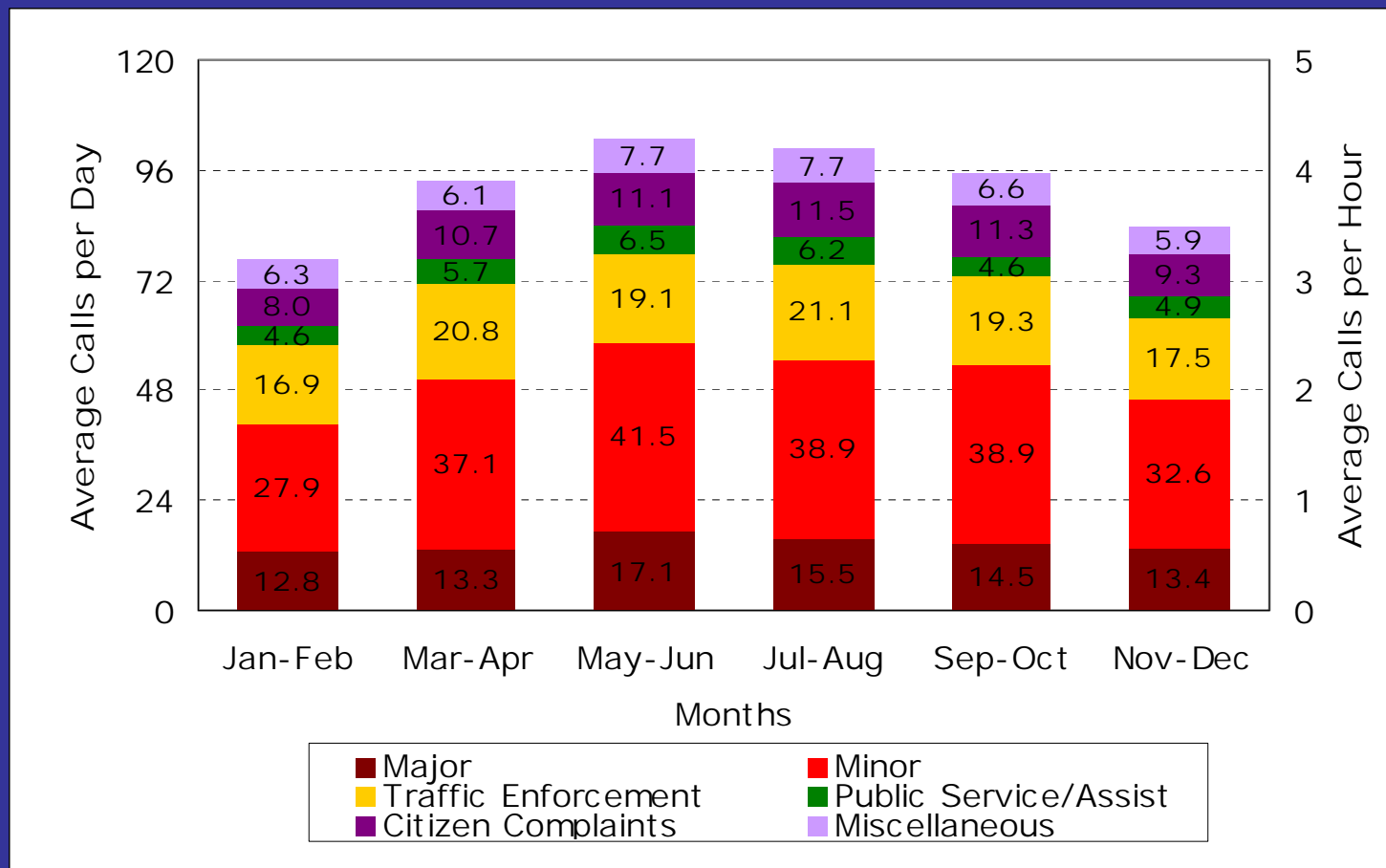
- November through February experienced 20% fewer calls than during the summer months.
- Call rates peaked at more than 100 per month during the period, more than four per hour.
- Police initiated calls averaged less than one per hour except during July-August.



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Average Calls per Day by Call Types, by Months



Observations

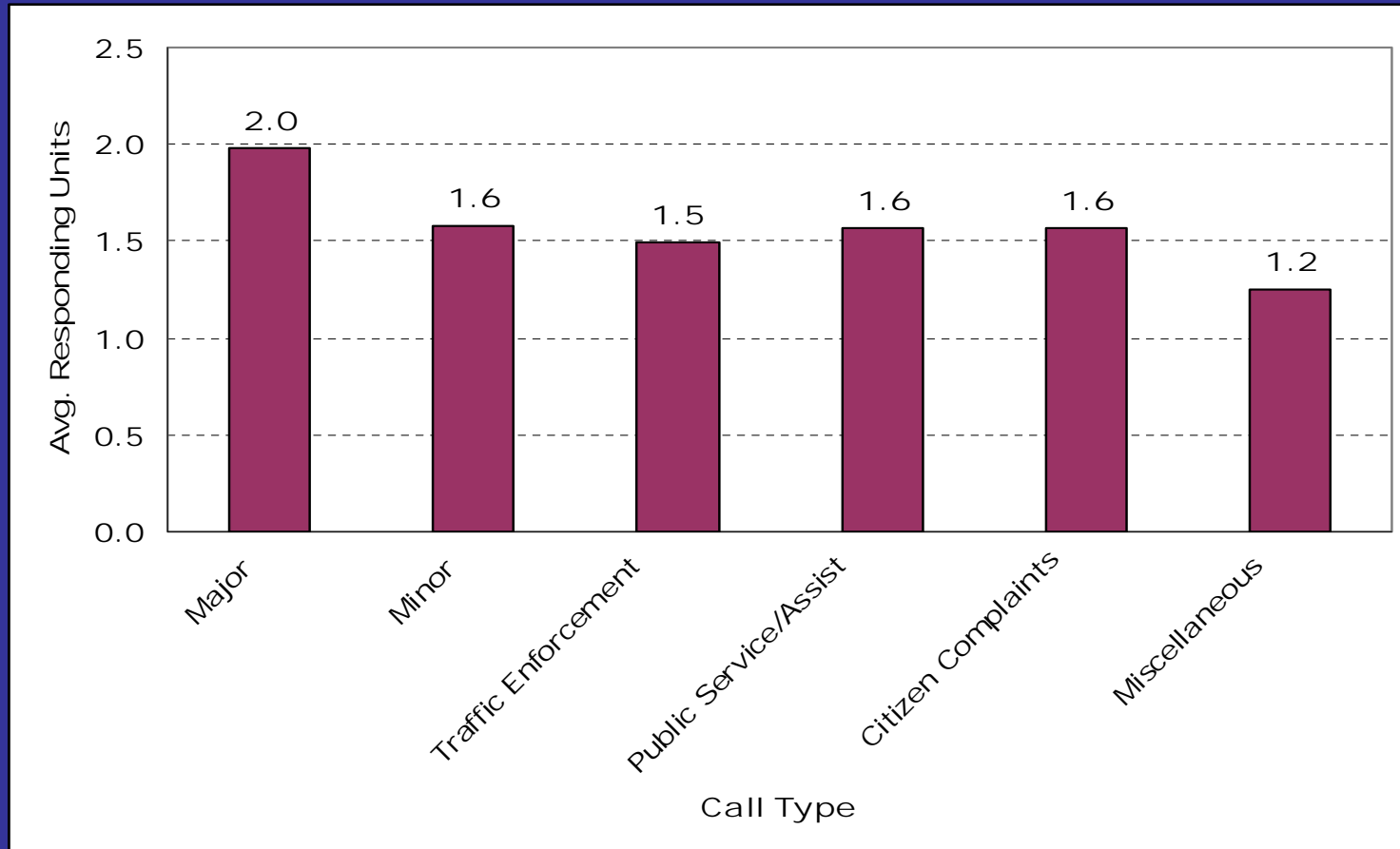
- May-June was the peak period for both major and minor crime related calls, 58.6 per day, approximately 2.5 per hour. This was almost 50% higher than the Jan-Feb period.
- There was less seasonal variation for other call types. For example from May through October, traffic related calls averaged around 20 per day.



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Average Responding Units per Call by Call Types



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Observations

- Major crime calls had the highest average, 2 patrol units per call
- Most of the other call categories the average was 1.5 or 1.6 units per call.



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Workload Analysis

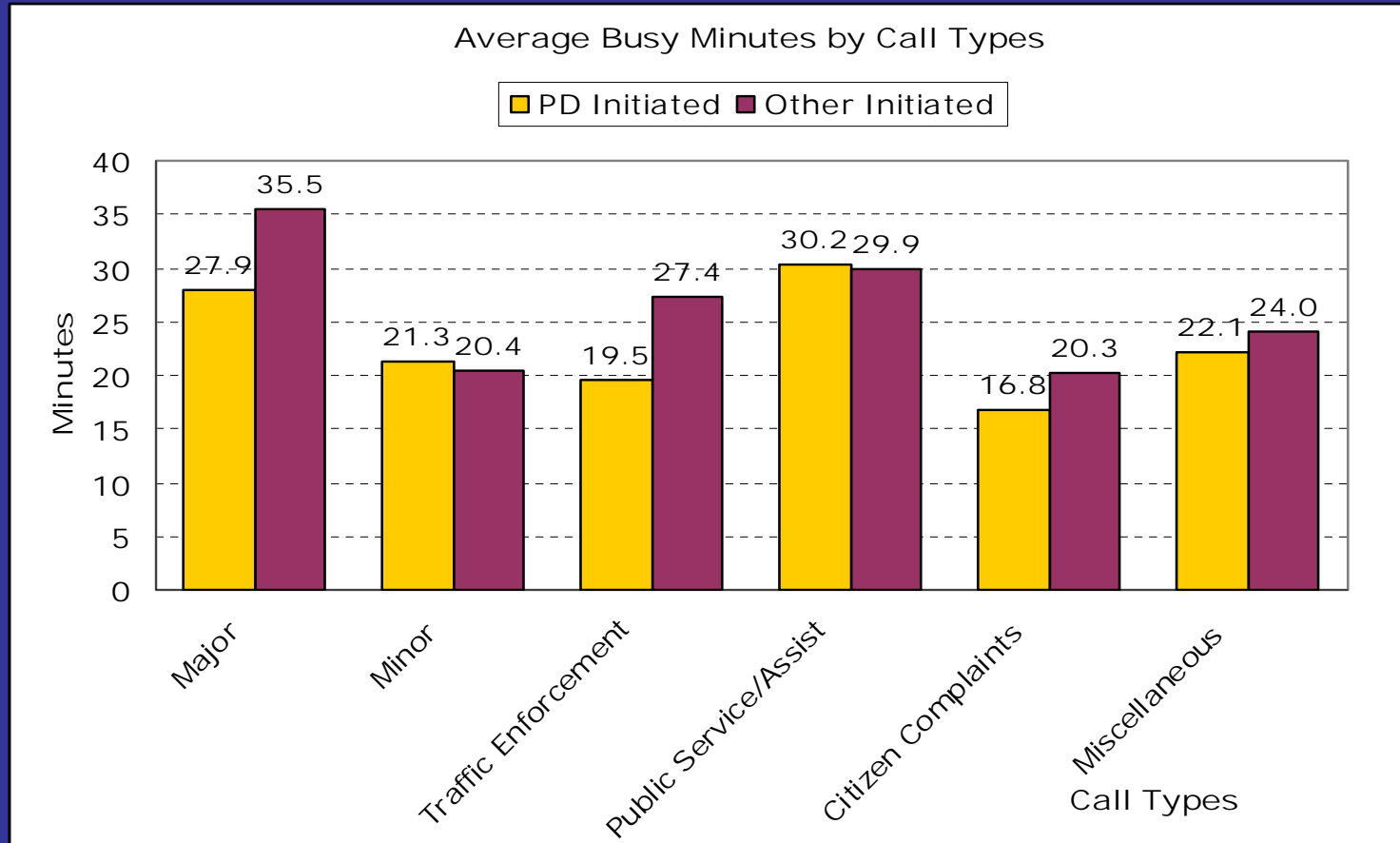
- The total number of calls does not capture the workload. The workload must reflect the time spent on a call and adjusted for the frequent dispatch of multiple units to the same call. The Annapolis data include time information for up to four units dispatched.
- We totaled the amount of time spent at calls for each of the units assigned to the call. In Figure and Table 5 we divide the patrol workload according the number of units assigned. All calls have a first unit. A significant proportion has a backup. An even smaller percent have a third unit and so forth.



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Average Minutes by Call Types and Initiators



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Observations

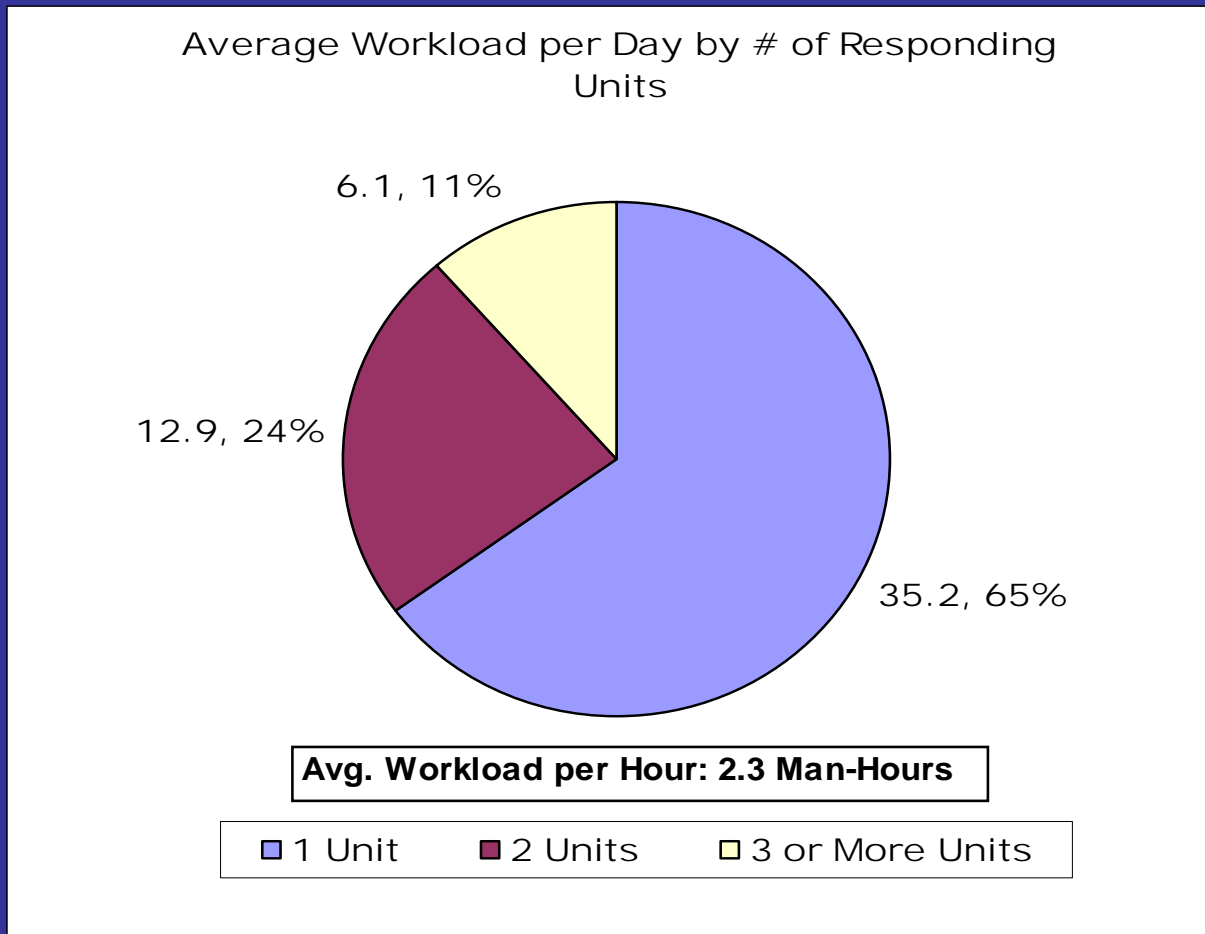
- The time spent on a call from dispatch to clear averaged 25 minutes if initiated by a caller. This average ranged from a high of over 35 minutes for major crimes to only 20 minutes for minor crimes and citizen complaints
- Patrol initiated activities usually took less time for the same category of call. This difference was, in part, due to the fact that by definition patrol initiated activities have no travel time to the call.



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Workload per Day by # of Responding Units



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Observations

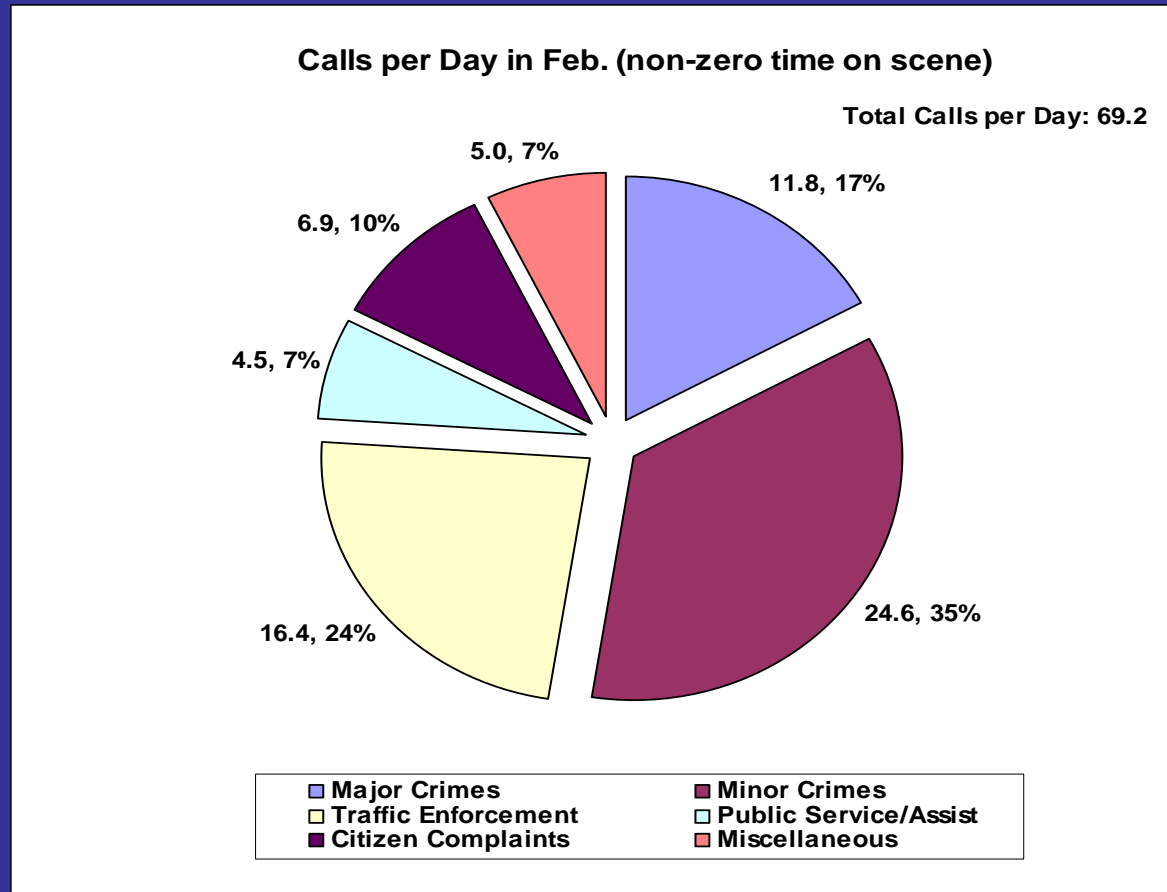
- In February the daily average call total was 69 as compared to more than 91 calls per day in August.
- The call type patterns, however, were relatively similar. Minor and major crimes accounted for 55% of the total in August and 57% of the total in February
- Total man-hours of dispatch recorded activities averaged 46 hours in February and 55 man-hours, or 20% more, in August.



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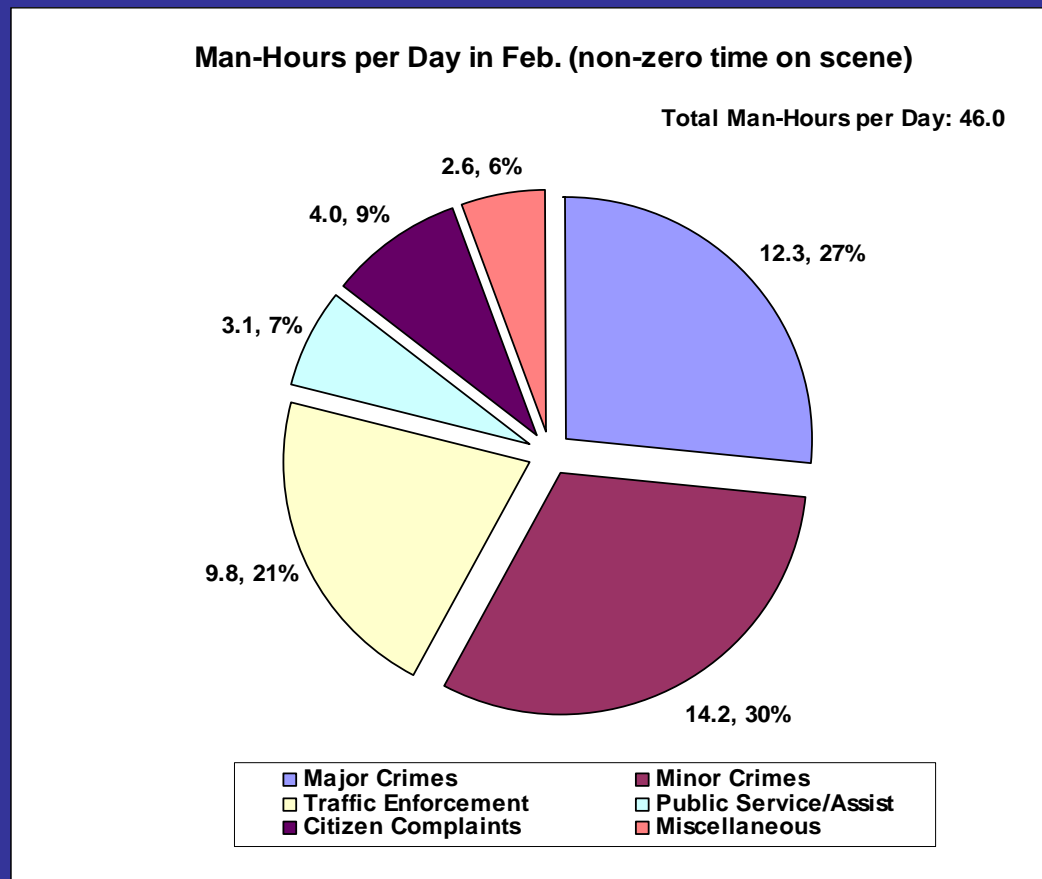
Call per Day by Call Types in Feb (No zero on-scene calls)



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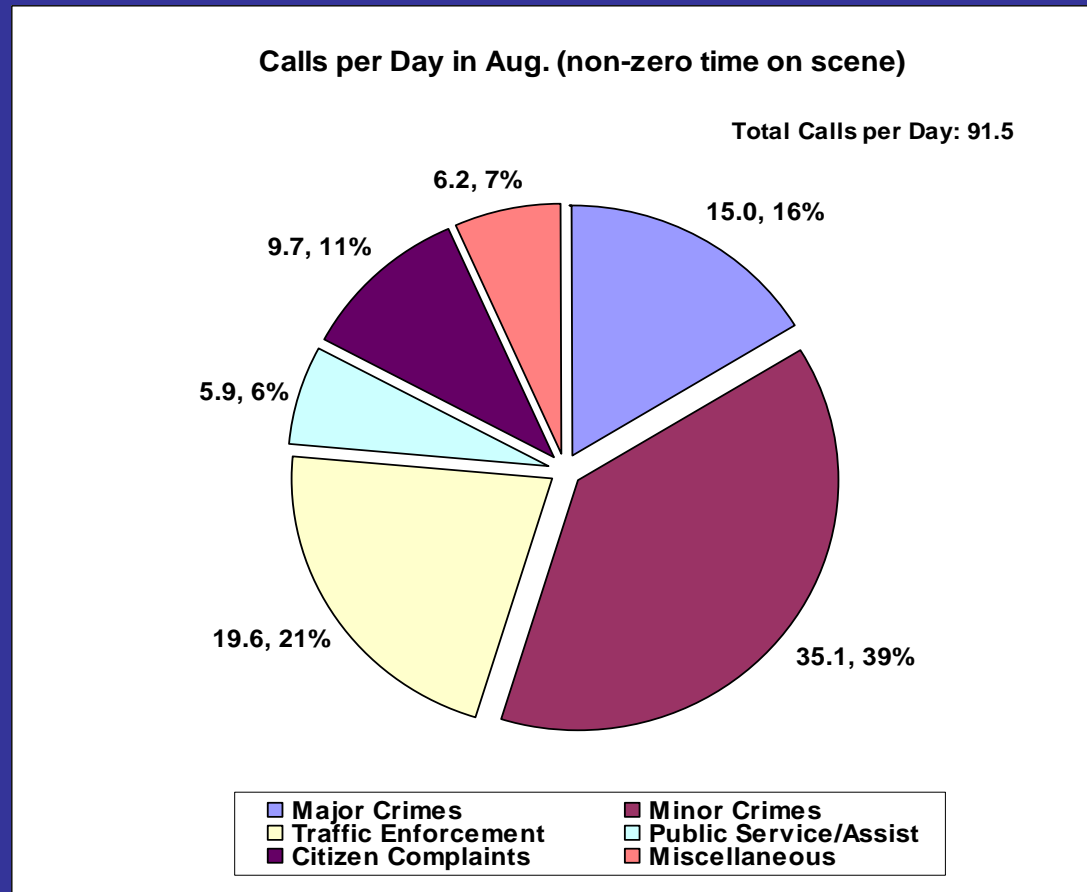
Average Workload per Day by Call Types in Feb



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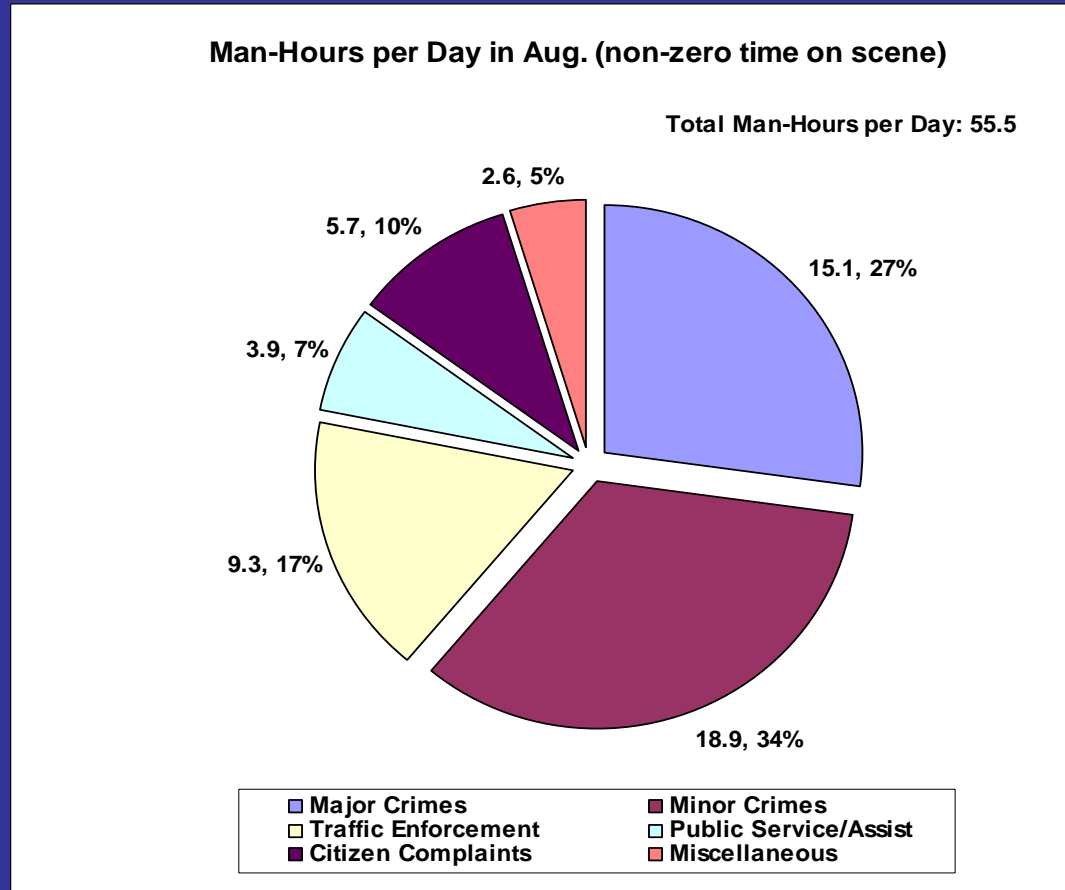
Call per Day by Call Types in Aug. (No zero on-scene calls)



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Average Workload per Day by Call Types in Aug. (No zero on-scene calls)



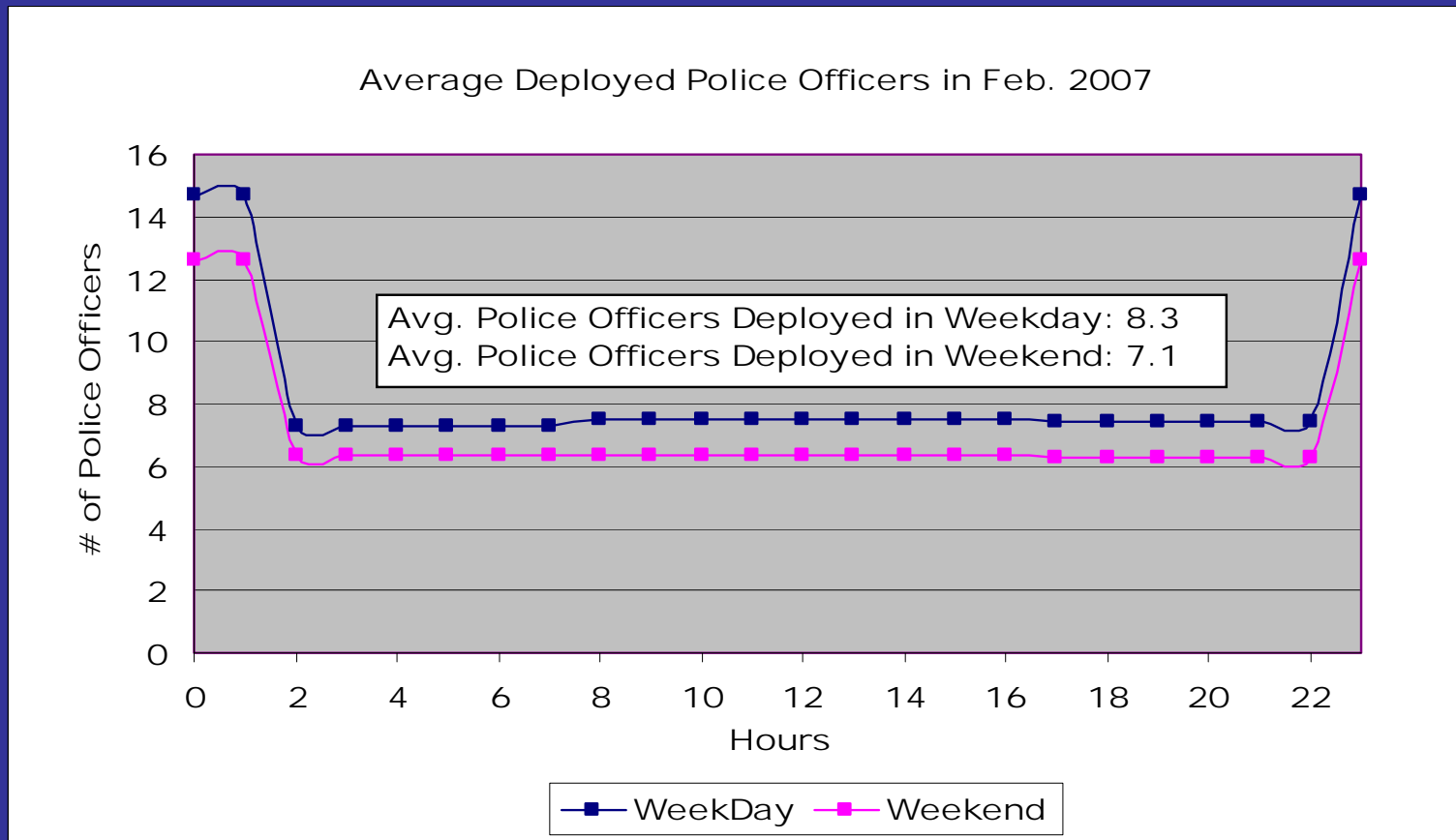
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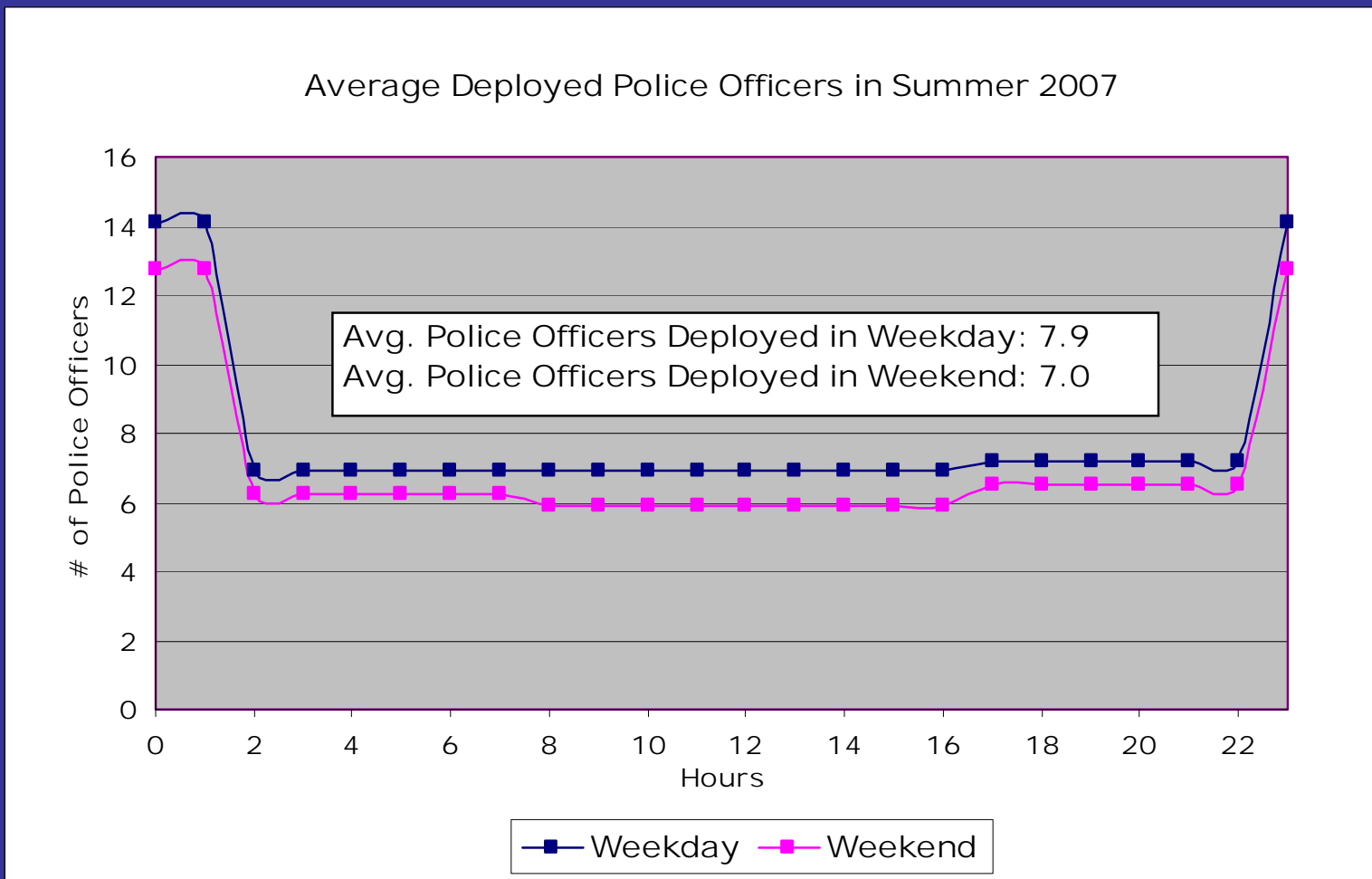
Deployment

The police department provided deployment data for the months of February and July for regular patrol and special operations units. The department uses two nine-hour and fifteen minute shifts and one ten-hour shift. There is a four hour overlap between shifts 2 and 3 between the hours of 10:15PM and 2:15 AM.

Average Deployed Officers - February



Average Deployed Officers - August



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Observations

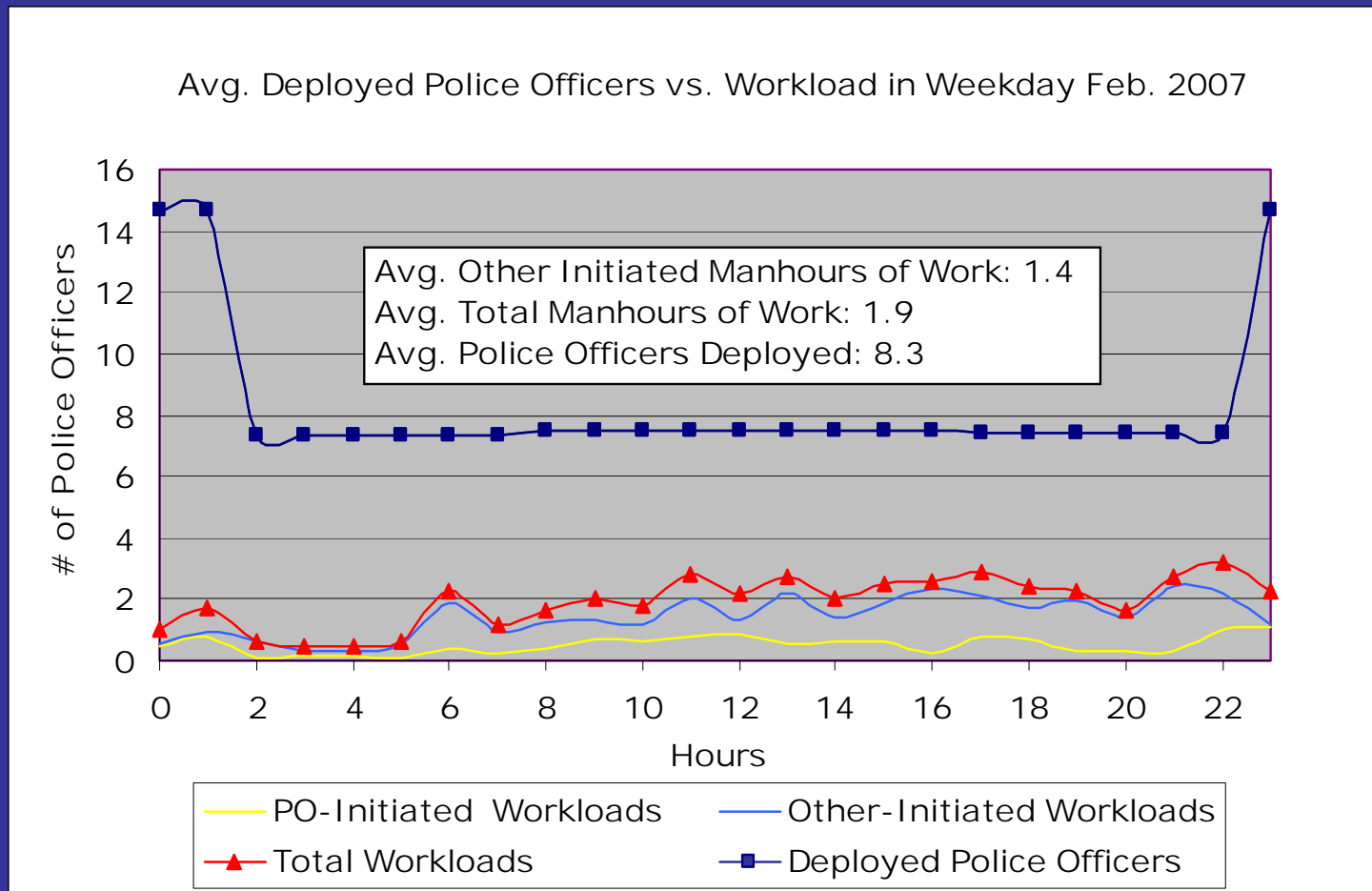
- There was significant variability in the number of patrol units deployed by shift in both winter and summer.
- The number of officers per shift ranged from five to nine in February but on a few days in July the minimum was 4 during shifts 1 and 3.
- In the winter more than 90% of the time the deployment level was between 6 and 8 officers. The most common value was 8 officers. The average per shift was just over 7 officers.
- In the summer, shift deployment was primarily 7 or more officers and on average slightly lower than in February.
- The weekday averages were higher than on weekends.
- During the late evening shift overlap, the number officers exceeds 12.
- The overall average for the 24 hour day includes the high numbers during the four hour overlap late at night. For weekdays in February the average was 8.3 compared to 7.9 during weekdays in July.



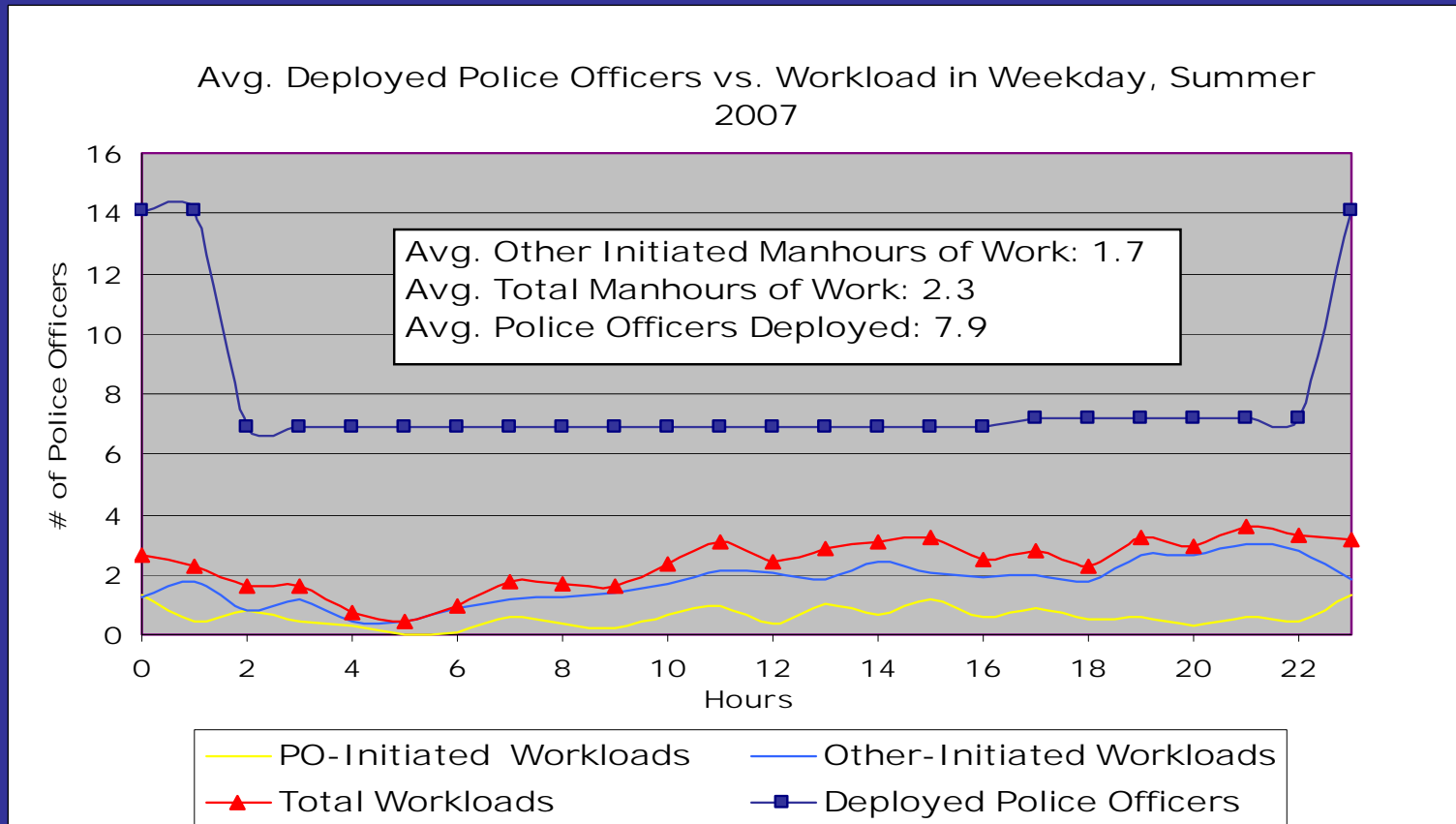
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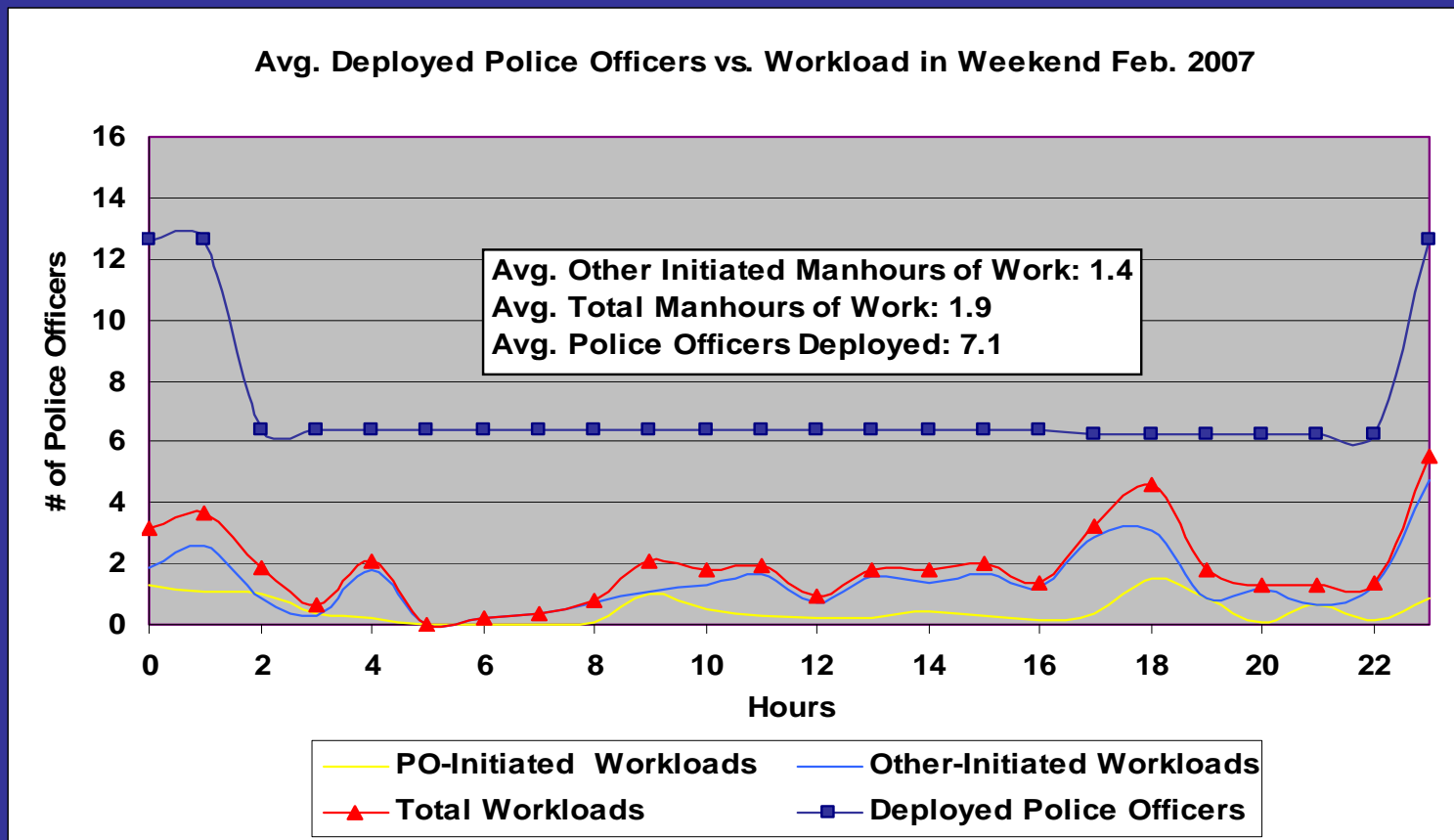
Deployment Compared to Workload by Hour of Day Weekdays, Feb. 2007



Weekdays, Summer 2007



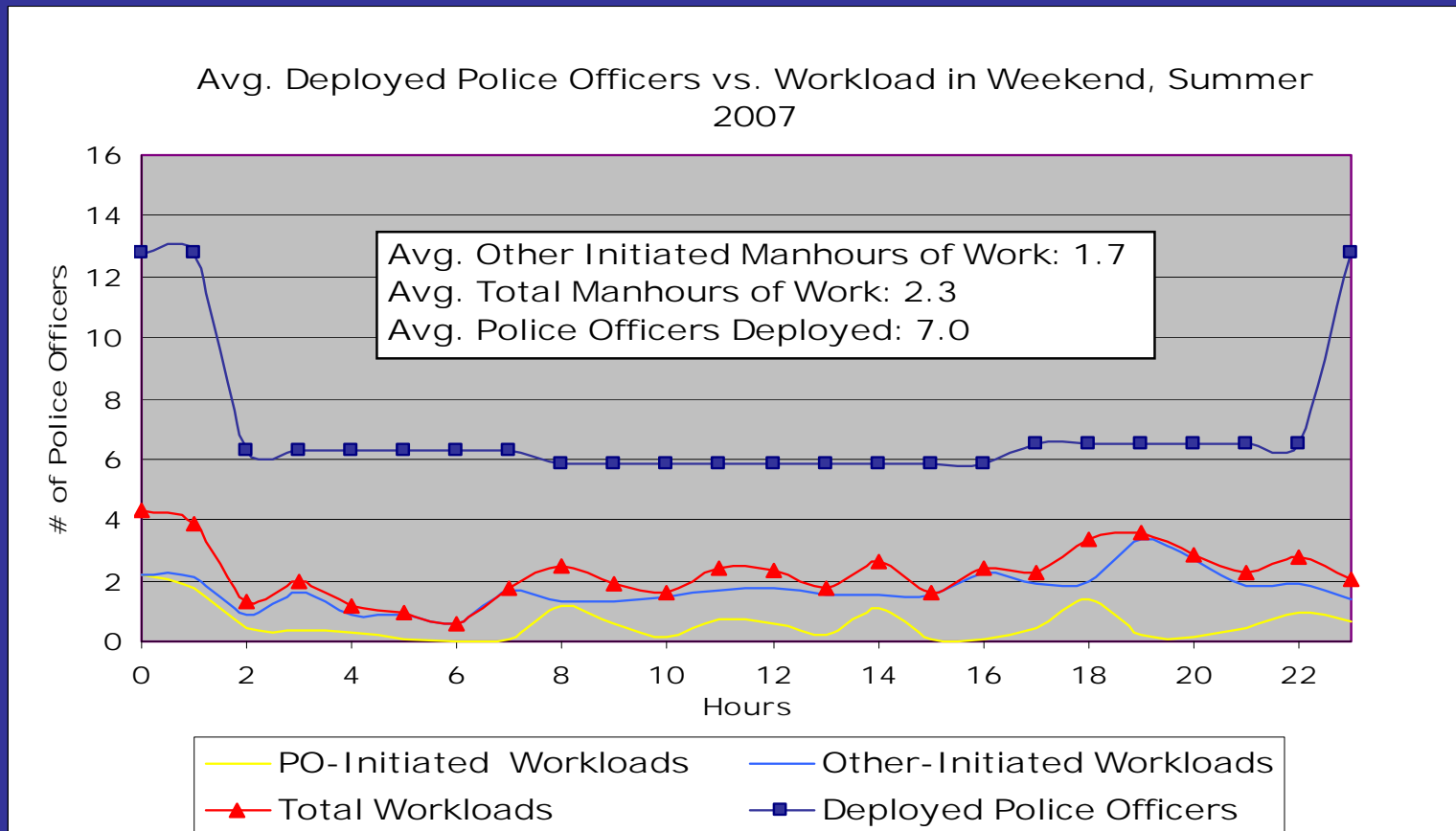
Deployed vs. Workload – Weekend, Feb.



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Ave. Deployed Officers vs. Workload, Aug.



Observations

- February Weekdays: Other initiated calls generated less than 2 man-hours of work per hour throughout most of the day and peaked at 2.5 man-hours at 2100. When combined with police initiated activities the maximum was slightly more than 3 man-hours as compared to the 7 officers who were deployed.
- August Weekdays: Other initiated calls generated more than 2 man-hours of work per hour through most of the afternoon and evening and peaked at 3 man-hours at 2100. When combined with police initiated activities the maximum was approximately 3.5 man-hours as compared to the 7 officers who were deployed.
- In neither instance was there any significant increase in total department workload during the overlap period.
- Appendix provides similar charts for weekends. These show higher maximum values after 11 PM and until 2 AM. In February, the maximum exceeded four hours of other initiated calls between 11 PM and midnight on weekends. However, with shift overlap, there were more than a dozen officers on duty to handle these calls.



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Special Operations Officers

- There was wide variability in the number of special operations officers on duty in both winter and summer.
- Many days and shifts had no officers. More than 20% of the time shift 1 in February and shift 1 and 2 in July had no special operations officers.
- Over one-third of the time, shifts 1 and 2 in February and shift 1 in July had 3 or more officers.
- Shift 1 in February and July had similar deployment levels.
- The highest average was 2.2 officers for shift 2 in February, which was 50% more than for shift 2 in July.

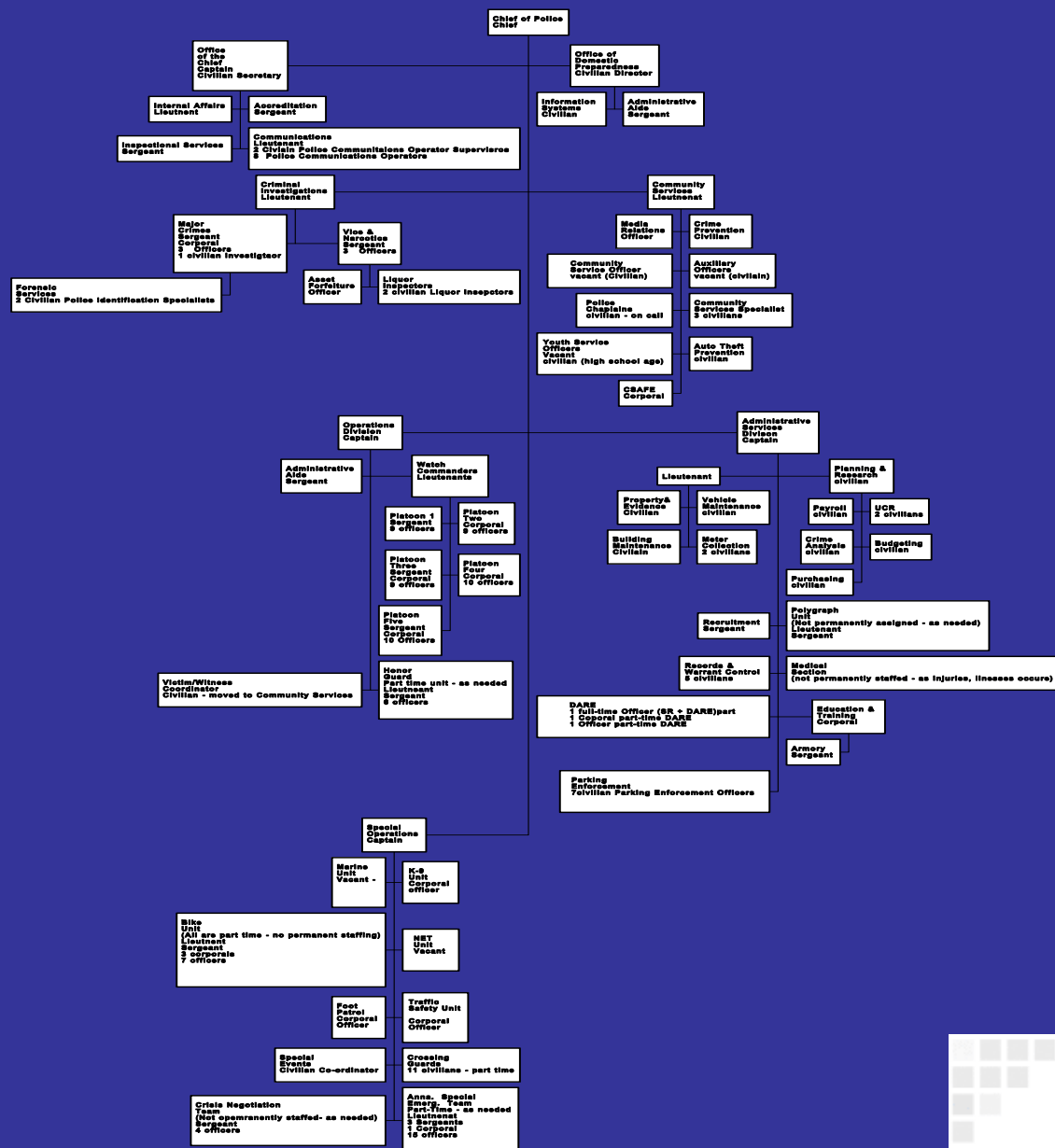
Operational Issues & Budget Recommendations



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Table of Organization



Sworn Staffing:

The current complement of police officers is more than adequate to handle the existing workload within the agency.

Given the serious nature of the violent crime problem within specific locations we recommend creation of a “hot spots” unit that would focus its activities within those areas.

We recommend the addition of a five (5) person public housing unit - four officers and a supervisor. These officers would perform enforcement as well as community policing activities in the public housing complexes, subsidized housing, etc. This unit would replace the current "overtime" contingent, would be funded with existing dollars, and represent no additional cost to the city. Consideration should be given to assigning the unit to a non-standard shift - such as 1800 - 0200, providing police resources during high crime periods as well as putting them in the complexes when most residents are home. The current overtime program would be discontinued and the dollars previously allocated to that operation- both city and housing authority would be used to pay for this new unit.



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There is considerable misunderstanding as to the actual authorized strength of the agency. Note that the existing staffing of sworn positions is 111 (with 2 of these officers on military leave and one on LOA). Within this number of 111 we understand that several officers have sustained injuries which will permanently prohibit them from returning to work as police officers.

Rather than creating more positions (other than the 5 member unit described above) the city should ensure that all currently employed officers are capable of working in their sworn capacity. Continuing to employ officers who can not perform police duties, and who have little likelihood to recover sufficiently to do so, wastes money and depletes the department's resources.

Once an officer has been identified as incapacitated for more than two weeks the responsibility for monitoring that employee should be assigned to the HR Department as is currently the case in the Fire Department. We note that the CBA provides that limited duty assignments shall not continue for more than 60 days with a review every 30 days. Further it provides that "an employee unable to return to his normal duties at the completion of limited duty shall be evaluated for separation and shall be placed on disability leave or leave without pay pending separation."



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As soon as HR and the Police Department determines, in conjunction with medical consultants, that the individual will not be returning to police duties, the processing of that individual's permanent retirement / disability should immediately begin. Employees in that status (awaiting permanent retirement / disability) should be transferred from the list of current APD employees and placed in a temporary funding status. This will free the vacated position for hiring of replacement personnel. Funding for these "holding" positions should be included in the new budget. The CBA provides that the totally disabled employee may transfer to a vacant position (including within other departments) for which he is qualified as determined by the personnel administrator.

Simply put, individuals who are not capable of performing the duties of police officer should be separated as sworn officers as rapidly as possible. Consistent with the CBA, they should be offered other employment opportunities for which they may be qualified.



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Civilian Staffing:

We note that there are 58 civilian positions of which 12 are crossing guards.

We believe that opportunities exist for the department to improve operations by adding additional civilian personnel. Additionally we believe that the city should consider “broad banding” titles within the department to allow for greater flexibility in assignments as well as growth opportunities for civil personnel. The title of “Police Technician” or similar should be created, which would require a skill set to perform numerous functions within the agency.

The Investigations unit should be staffed with at least two clerical / support civilians relieving investigators of answering phones, opening mail, etc. We believe this to be a critical adjustment.

Even more important is the addition of a highly skilled individual to command the CAD / RMS unit.

The department is lagging badly in technology and this is resulting in significant inefficiencies within the department as well as an absence of management information to allow police managers and elected officials to fully understand the activities of the department and to establish appropriate policies. We encourage the city to create a senior management position which would include in its skill set experience in managing contemporary CAD / RMS systems.

As we have advised previously we believe that the currently work schedule drains resources and should be modified. We have also advised that the current table of organization should be revisited to better organize the department along functional lines.

Accordingly we recommend that the FY 2008 / 2009 budget reflect a total of 117 authorized sworn positions.

Those positions should be the ones currently filled by existing personnel as well as the reclassification of an existing civilian position to a sworn title – see below - and the addition of the 5 new positions.

Additionally, we recommend that no additional positions be added to the authorized strength of 117 until a complete review of the Table of Organization and work schedule is finalized.

Finally, we recommend that once more active patrol operations commence within “hot spot” areas another review of workload / calls for service – with emphasis on officer initiated calls – be conducted and the matter of staffing then be revisited

We note that the position of “Major Crimes Investigator” exists as a civilian title. We can identify no meaningful reason for this position to be a non-sworn position and this should be reclassified as a sworn investigator position, filled by a sworn officer.

Finally we believe that the entire area of crime scene technology be revisited. We believe there is a need to reorganize the department’s approach to forensics and to provide additional training to both civilians and sworn personnel in this rapidly changing area of study. We note that the supervisor of the crime scene unit is a Sergeant assigned to the Investigations Division (CID).

The CID is not located within police headquarters but the crime scene unit is. This is an impossible situation. It is clear to us that the crime scene unit requires closer supervision and leadership and we recommend that a civilian supervisor position (with appropriate KSA’s) be created and that the person report directly to an individual housed within police headquarters.

Communications / Records:

Funding should be made available to fully evaluate the computer aided dispatch and records management system (CAD/RMS) and to purchase a new system within the next fiscal year if needed.

It is unclear as to what the capabilities of the current system are. However it is exceptionally clear that, as currently operated, the system does not provide the necessary data in a meaningful format, to allow police and city management to fully understand current operations.

Further, the current system relies largely on hard copy records and does not permit the type of records processing available to modern police agencies. These are issues that need to be addressed immediately. Successful implementation of a modern CAD / RMS will positively affect all areas of the department's operations and greatly improve the capabilities of the investigations unit in particular.

Recruiting / Selection:

The responsibility for recruiting and selection of police officers clearly falls within the responsibility of the Human Resources Department.

However, those duties have been distributed between the HR Department and Police and have obviously led to difficulties in meeting recruiting objectives. The police department has \$50,000 designated in the 2008-2009 fiscal year budget for recruitment of new police officers.

These funds should be transferred to the HR Department and the full responsibility for recruiting be placed in that agency with close interaction with the police required.

The recruiting process for firefighters, which is apparently working well, is operated by HR and that should be the model for police recruitment.



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Relocation of the Criminal Investigations Division & Internal Affairs:

Returning the Criminal Investigations Division and Internal Affairs unit to the police station is essential to the efficient and effective operation of the Division.

We believe that adequate space currently exists within the police station to immediately move these units. While the current space available may not be the final location of these units, consolidating police operations into one location is critical and must be accomplished immediately. If space is not currently available and will not be available within the next month or so, temporary quarters should be obtained (mobile offices) and located on site at police headquarters.

The importance of routine interaction between patrol and investigations is well documented; the major separation of these units, which has existed apparently for over a decade, must be addressed. We are unable to be more definitive about this issue since we were unable to meet with the individual responsible for this property.

Nonetheless the consolidation of investigations and IA into the police station (or adjunct facilities) should be of the highest priority.



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Alternative Patrol Capabilities:

The City should take advantage of alternative patrol methods including mechanized patrol using alternative vehicles such as Segways, Golf Carts, Scooters, GEM Vehicles, etc. and the purchase of these vehicles should be funded in this budget.

Additionally we believe that the city should consider adding a two member mounted unit which would be utilized for patrol not only in the downtown areas but also in “hot spot” areas where high levels of activity are occurring. We believe that the city should fund, as part of the upcoming budget, resources to begin planning for such a unit as well as to explore potential funding for the unit from private sources.

We recommend that the APD determine if there are other existing police mounted units (state, county, GSA) which may be available to establish a mounted presence to allow the city to review their impact while considering establishment of a permanent unit within APD.

Additionally we recommend that the APD dramatically step up traffic enforcement, particularly within the public housing properties. Some confusion has existed about the APD's enforcement authority on these roads. However, it appears clear from discussions with the Housing Authority that these are public roads and it is the APD's responsibility to police traffic laws on them. Further, the Housing Authority indicates that it is prepared to enter into a contractual relationship with the City to provide the APD with enforcement authority even on Housing Authority properties. The department currently operates two motorcycles – consideration should be given to increasing this to four motors.

However, we strongly recommend against continuation of a “Traffic Unit”. Our experience shows us that creation of such units fragments the patrol capabilities of the department and leads to less supervision and coordination of personnel. Rather, motorcycle units should be part of patrol and remain under the control on the on duty patrol supervisor.



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Community Policing:

The city must set aside money for community policing initiatives. Ideally enforcement, particularly within the public housing properties, will increase and contingent and with these youth and domestic violence programs will be critical.

Additionally there is a need to train the downtown officers in crisis intervention skills and build liaison with homeless advocates and shelters to deal with panhandlers, etc.



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